

disseminated over the same channels as the CONELRAD Radio Alert. Radio stations in the noncommercial educational FM and the international broadcast services may resume normal operating schedules when the CONELRAD Radio All Clear is received, unless otherwise restricted by order of the Commission.

§ 3.1006 *Tests.* Tests of the CONELRAD alerting and operating systems of the noncommercial educational FM and the international broadcast services may be conducted at appropriate intervals. Reports of the results of such tests may be required in a form to be prescribed by the Commission.

§ 3.1007 *Log entries.* Appropriate entries of all CONELRAD tests, drills or operations shall be made in the station log.

Part 4—Experimental, Auxiliary, and Special Broadcast Services [Revised] ¹

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¹ Part headnote amended, 21 F. R. 3684, May 30, 1956.

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RULES GOVERNING ADMINISTRATIVE PROCEDURE

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RULES RELATING TO EQUIPMENT

- 4.351 Equipment changes.

RULES RELATING TO TECHNICAL OPERATION

- 4.361 Frequency tolerance.
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- 4.431 Purpose of remote pickup broadcast stations.
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- 4.462 Frequency monitors and measurements.
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- 4.561 Frequency tolerance.
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- 4.661 Frequency tolerance.
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- 4.750 Equipment and installation.
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 4.762 Frequency monitors and measurements.
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AUTHORITY: §§ 4.1 to 4.784 issued under sec. 4, 48 Stat. 1066, as amended; 47 U. S. C. 154. Statutory provisions interpreted or applied are cited to text in parentheses.

Prior Amendments

1954: 19 F. R. 4744, Aug. 3; 19 F. R. 5145, Aug. 14; 19 F. R. 5147, Aug. 14.
 1955: 20 F. R. 3508, May 19.

IN GENERAL

§ 4.1 *Broadcast services covered by this part.* The following broadcast services are covered by this part:

(a) Experimental and developmental broadcast:

(1) Experimental television broadcast (Subpart A).

(2) Experimental facsimile broadcast (Subpart B).

(3) Developmental broadcast (Subpart C).

(b) Auxiliary broadcast:

(1) Remote pickup broadcast (Subpart D).

(2) Broadcast STL and FM intercity relay (Subpart E).

(3) Television pickup (Subpart F).

(4) Television STL (Subpart F).

(5) Television inter-city relay (Subpart F).

(c) *Special broadcast.* (1) Television Broadcast translator (Subpart G).

CODIFICATION: § 4.1 was revised, 20 F. R. 4463, June 25, 1955. Subsequently, paragraph (c) was added, 21 F. R. 3634, May 30, 1956.

RULES GOVERNING ADMINISTRATIVE PROCEDURE

§ 4.11 *Applications.* (a) If application is for a construction permit or a license for a new remote pickup broadcast, broadcast STL, FM inter-city relay, television pickup, television STL or television inter-city relay station, or to make changes in facilities, or modification of license, or renewal of license of any such existing station, an FCC Form 313 should be filed.

(b) If application is for a construction permit for an experimental television, experimental facsimile or developmental broadcast station, or to make changes in facilities, or modification of license of

¹ Added subsequent to revision of part.

any such existing station, FCC Form 309 should be filed; for a station license, FCC Form 310 should be filed; for renewal of station license, FCC Form 311 should be filed.

(c) If application is for a construction permit for a new television broadcast translator station or to make changes in an existing television broadcast translator station, FCC Form 346 shall be filed, in triplicate; if for a station license, FCC Form 347 shall be filed; if for renewal of station license, FCC Form 348 shall be filed.

CODIFICATION: § 4.11 was revised, 20 F. R. 4463, June 25, 1955. Subsequently, paragraph (c) was added, 21 F. R. 3684, May 30, 1956.

§ 4.12 Full disclosures. Each application shall contain full and complete disclosures with regard to the real party or parties in interest, and their legal, technical, financial, and other qualifications, and as to all matters and things required to be disclosed by the application forms.

[20 F. R. 4463, June 25, 1955]

§ 4.13 Installation of apparatus. Applications for construction permits or modification thereof involving the installation of new transmitting apparatus should be filed at least 60 days prior to the contemplated installation.

[20 F. R. 4463, June 25, 1955]

§ 4.14 Period of construction. Each construction permit will specify a maximum of 60 days from the date of granting thereof as the time within which construction of the station shall begin, and a maximum of 6 months thereafter as the time within which construction shall be completed and the station ready for operation, unless otherwise determined by the Commission upon proper showing in any particular case.

[20 F. R. 4463, June 25, 1955]

§ 4.15 Forfeiture of construction permits; extension of time. (a) A construction permit shall be automatically forfeited if the station is not ready for operation within the time specified therein or within such further time as the Commission may have allowed for completion, and a notation of the forfeiture of any construction permit under this provision will be placed in the records of the Commission as of the expiration date.

(b) An application (Form FCC No. 701) for extension of time within which to construct a station shall be filed at least thirty days prior to the expiration date of such permit if the facts supporting such application for extension are known to the applicant in time to permit such filing. In other cases such applications will be accepted upon a showing satisfactory to the Commission of sufficient reasons for filing within less than thirty days prior to the expiration date. Such applications will be granted upon a specific and detailed showing that the failure to complete was due to causes not under the control of the grantee, or upon a specific and detailed showing of other matters sufficient to justify the extension.

[20 F. R. 4463, June 25, 1955]

§ 4.16 Equipment tests. (a) During the process of construction of any class of radio station listed in this part, the permittee, after notifying the Commission and Engineer in Charge of the district in which the station is located, may without further authority of the Commission, conduct equipment tests for the purpose of such adjustments and measurements as may be necessary to assure compliance with the terms of the construction permit, the technical provisions of the application therefor, the rules and regulations, and the applicable engineering standards.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of equipment tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Equipment tests may be continued so long as the construction permit shall remain valid.

(d) The authorization for tests embodied in this section shall not be construed as constituting a license to operate but as a necessary part of construction.

[20 F. R. 4463, June 25, 1955]

§ 4.17 Service or program tests. (a) Upon completion of construction of a radio station in accordance with the terms of the construction permit, the technical provisions of the application therefor, and the rules and regulations and applicable engineering standards, and when an application for station license has been filed showing the station to be in satisfactory operating condition,

the permittee of any class of station listed in this part may, without further authority of the Commission, conduct service or program tests: *Provided*, That the Engineer in Charge of the district in which the station is located and the Commission are notified at least two (2) days (not including Sundays and Saturdays and legal holidays when the offices of the Commission are not open) in advance of the beginning of such operation.

(b) The Commission may notify the permittee to conduct no tests or may cancel, suspend, or change the date for the beginning of such tests as and when such action may appear to be in the public interest, convenience, and necessity.

(c) Unless sooner suspended or revoked program test authority will continue valid during Commission consideration of the application for license and during this period further extension of the construction permit is not required. Program test authority shall be automatically terminated by final determination upon the application for station license.

(d) The authorization for tests embodied in this section shall not be construed as approval by the Commission of the application for station license.

[20 F. R. 4463, June 25, 1955]

§ 4.18 *License period; renewal.* (a) Licenses for the following classes of broadcast stations normally will be issued for a period of one year expiring as follows:

Class of Station and Date of Expiration

Experimental television broadcast station: Apr. 1.

Experimental facsimile broadcast station: Mar. 1.

Developmental broadcast station: May 1.

Television broadcast translator station: June 1.

(b) Licenses for stations in the Auxiliary Broadcast Services will be issued for a period running concurrently with the licenses of the broadcast station with which such auxiliary stations are used. A remote pickup broadcast station licensed for use with more than one broadcast station will be licensed for a period running concurrently with the license of the broadcast station having the longer license period.

CODIFICATION: § 4.18 was revised, 20 F. R. 4463, June 25, 1955. Subsequently, under the class of stations in paragraph (a), the

item "Television broadcast translator station" was added, 21 F. R. 3684, May 30, 1956.

§ 4.19 *License, simultaneous modification and renewal.* When an application is granted by the Commission necessitating the issuance of a modified license less than 60 days prior to the expiration date of the license sought to be modified, and an application for renewal of said license is granted subsequent or prior thereto (but within 30 days of expiration of the present license) the modified license as well as the renewal license will be issued to conform to the combined action of the Commission.

[20 F. R. 4463, June 25, 1955]

§ 4.20 *Renewal of license.* (a) Unless otherwise directed by the Commission each application for renewal of license of an auxiliary broadcast station shall be filed at least 90 days prior to the expiration date for the license sought to be renewed; and each application for renewal of license of an experimental or developmental broadcast station or a television broadcast translator station shall be filed at least 60 days prior to the expiration date of the license sought to be renewed.

(b) Whenever the Commission regards an application for renewal of a station license for any class of broadcast station listed in § 4.1 as essential to the proper conduct of a hearing or investigation, and specifically directs that it be filed by a certain date, such application shall be filed within the time thus specified. If the licensee fails to file such application within the prescribed time, the hearing or investigation shall proceed as if such renewal application had been received.

(c) A supplemental report shall be submitted with each application for renewal of license of a station licensed experimentally¹ in accordance with the regulations governing each class of station.

CODIFICATION: § 4.20 was revised, 20 F. R. 4463, June 25, 1955. Subsequently, paragraph (a) was amended to read as set forth above, 21 F. R. 4109, June 15, 1956.

§ 4.21 *Temporary extension of station licenses.* Where there is pending before the Commission any application, investigation or proceeding which, after

¹ The phrases "station licensed experimentally" and "experimental station" are used interchangeably.

hearing, might lead to or make necessary the modification of, revocation of, or the refusal to renew an existing auxiliary or experimental broadcast station license or a television broadcast translator station license, the Commission may, in its discretion, grant a temporary extension of such license: *Provided, however*, That no such temporary extension shall be construed as a finding by the Commission that the operation of any radio station thereunder will serve public interest, convenience, and necessity beyond the express terms of such temporary extension of license: *And provided further*, That such temporary extension of license will in no wise affect or limit the action of the Commission with respect to any pending application or proceeding.

[21 F. R. 4109, June 15, 1956]

Prior Amendments

1955: 20 F. R. 4464, June 25.

§ 4.22 *Repetitious applications.* (a) Where an applicant has been afforded an opportunity to be heard with respect to a particular application for a new auxiliary or experimental broadcast station or a television broadcast translator station or for change of existing service or facilities, and the Commission has, after hearing or default, denied the application or dismissed it with prejudice, the Commission will not consider another application for a station of the same class to serve in whole or in part the same area, by the same applicant or by his successor or assignee or on behalf of or for the benefit of the original parties in interest, until after the lapse of 12 months from the effective date of the Commission's order.

(b) Where an appeal has been taken from the action of the Commission in denying a particular application, another application for the same class of broadcast station and for the same area, in whole or in part, filed by the same applicant or by his successor as assignee, or on behalf of or for the benefit of the original parties in interest, will not be considered until the final disposition of such appeal.

CODIFICATION: § 4.22 was revised, 20 F. R. 4464, June 25, 1955. Subsequently, paragraph (a) was amended to read as set forth above, 21 F. R. 4109, June 15, 1956.

§ 4.23 *Assignment or transfer of control*—(a) *Voluntary.* Application for consent to voluntary assignment of a construction permit or license for an

auxiliary or experimental broadcast station or for a television broadcast translator station, or for consent to voluntary transfer of control of a corporation holding such a construction permit or license shall be filed with the Commission on Form FCC 314 (Assignment of License), FCC Form 315 (Transfer of Control) or FCC Form 316 (Short Form) at least 60 days prior to the contemplated effective date of assignment or transfer of control.

(b) *Involuntary.* In the event of the death or legal disability of a permittee or licensee, or a member of a partnership, or a person directly or indirectly in control of a corporation, which is a permittee or licensee:

(1) The Commission shall be notified in writing promptly of the occurrence of such death or legal disability, and

(2) Within thirty days after the occurrence of such death or legal disability, application on Form FCC No. 314 or 315 shall be filed for consent to involuntary assignment of such station permit or license or for involuntary transfer of control of such corporation to a person or entity legally qualified to succeed to the foregoing interests under the laws of the place having jurisdiction over the estate involved.

(Sec. 303, 48 Stat. 1082, as amended; sec. 5, 66 Stat. 713; 47 U. S. C. 303, 155)

CODIFICATION: § 4.23 was revised, 20 F. R. 4464, June 25, 1955. Subsequently, paragraph (a) was amended to read as set forth above, 21 F. R. 4109, June 15, 1956.

SUBPART A—RULES GOVERNING EXPERIMENTAL TELEVISION BROADCAST STATIONS

SOURCE: §§ 4.101 to 4.184 appear at 20 F. R. 4464, June 25, 1955, except as otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 4.101 *Definitions.* (a) The term "experimental television broadcast station" means a station licensed for experimental transmission of transient visual images of moving or fixed objects for simultaneous reception and reproduction by the general public.¹

§ 4.102 *Purpose.* A license for an experimental television broadcast station will be issued for the purpose of carrying on research and experimental

¹ The transmission of synchronized sound (aural broadcast) is considered an essential phase of television broadcast and one license will authorize both visual and aural broadcast.

tion for the advancement of television broadcasting which may include tests of equipment, training of personnel, and experimental programs as are necessary for the experimentation.

§ 4.103 *Frequency assignment.* (a) Frequencies allocated to television broadcasting and the various categories of television auxiliary stations, in the Commission's Table of Frequency Allocations (Part 2 of this chapter), may be assigned respectively to experimental television broadcast and experimental television auxiliary stations.

(b) More than one frequency may be assigned upon a satisfactory showing of the need therefor.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the least likelihood of interference to established stations, shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to television broadcasting or the various categories of television auxiliary stations, the Commission may authorize an experimental television station of any class to operate on other frequencies upon a satisfactory showing of the need therefor and a showing that the proposed operation can be conducted without causing harmful interference to established services: *Provided, however,* That experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies, will not be authorized prior to a determination by the Commission that the development of such apparatus or the rendition of such service would serve the public interest.

(Sec. 303, 48 Stat. 1082, as amended; 47 U. S. C. 303) [21 F. R. 3064, May 8, 1956]

RULES GOVERNING ADMINISTRATIVE PROCEDURE

§ 4.111 *Administrative procedure.* See §§ 4.11 to 4.23, inclusive.

§ 4.112 *Supplementary statements to be filed with application for construction permit.* A supplementary statement shall be filed with and made a part of each application for construction permit for any experimental television broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only.

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on, and

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation,

(d) That any frequency which may be assigned is subject to change without advance notice or hearing,

(e) That any authorization issued pursuant to the application may be cancelled at any time without notice or hearing.

§ 4.113 *Supplementary reports to be filed with application for renewal of license.* (a) A report shall be filed with each application for renewal of experimental television broadcast station license which shall include a statement of each of the following:

(1) Number of hours operated.

(2) Full data on research and experimentation conducted including the type of transmitting and studio equipment used and their mode of operation.

(3) Data on expense of research and operation during the period covered.

(4) Power employed, field intensity measurements and visual and aural observations and the types of instruments and receivers utilized to determine the station service area and the efficiency of the respective types of transmissions.

(5) Estimated degree of public participation in reception and the results of observations as to the effectiveness of types of transmission.

(6) Conclusions, tentative and final.

(7) Program for further developments in television broadcasting.

(8) All developments and major changes in equipment.

(9) Any other pertinent developments.

(b) Special or progress reports shall be submitted from time to time as the Commission shall direct.

RULES RELATING TO LICENSING POLICIES

§ 4.131 *Licensing requirements, necessary showing.* (a) An applicant for a new experimental television broadcast station, change in facilities of any existing station, or modification of license is required to make a satisfactory showing

of compliance with the general requirements of the Communications Act of 1934, as amended, as well as the following:

(1) That the applicant has a definite program of research and experimentation in the technical phases of television broadcasting, which indicates reasonable promise of substantial contribution to the developments of the television art.

(2) That upon the authorization of the proposed station the applicant can and will proceed immediately with its program of research and experimentation.

(3) That the transmission of signals by radio is essential to the proposed program of research and experimentation.

(4) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license for an experimental television broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the Commission will determine and specify the time division.

(c) A license for an experimental television broadcast station will be issued only on the condition that no objectionable interference will result from the transmissions of the station to the regular program transmissions of television broadcast stations. It shall at all times be the duty of the licensee of an experimental television broadcast station to ascertain that no interference will result from the transmissions of its station. With regard to interference with the transmissions of an experimental television broadcast station or the experimental or test transmissions of a television broadcast station, the licensees shall make arrangements for operations to avoid interference.

§ 4.132 *Power limitations.* Experimental television broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards

have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 4.133 *Emission authorized.* In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out fully the needs shall be made by informal application.

§ 4.134 *Multiple ownership.* No persons (including all persons under common control) shall control directly or indirectly, two or more experimental television broadcast stations (other than television relay broadcast stations) unless a showing is made that the character of the programs of research require a licensing of two or more separate stations.

RULES RELATING TO EQUIPMENT

§ 4.151 *Equipment changes.* The licensee of an experimental television broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

RULES RELATING TO TECHNICAL OPERATION

§ 4.161 *Frequency tolerance.* The licensee of an experimental television broadcast station operating below 450 megacycles shall maintain the operating frequency of its station within plus or minus 0.01 percent of the assigned frequency. The licensee of an experimental television broadcast station operating above 450 megacycles shall maintain the operating frequency of its station within plus or minus 0.05 percent of the assigned frequency. However, where a lesser tolerance is necessary in order to prevent interference, the Commission will specify the tolerance.

§ 4.162 *Frequency monitors and measurements.* The licensee of an experimental television broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

§ 4.163 *Time of operation.* (a) A licensee of an experimental television broadcast station is not required to adhere to a regular schedule of operation but shall actively conduct a program of research and experimentation.

(b) The program of research and experimentation as offered by an applicant in compliance with the requirements for obtaining a license for an experimental television broadcast station shall be adhered to in the main, unless the licensee is authorized to do otherwise by the Commission.

(c) The Commission may from time to time require that a station licensed experimentally conduct such experiments as are deemed desirable and reasonable for the development of the service.

§ 4.164 *Station inspection.* The licensee of each experimental television broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 4.165 *Station and operator licenses; posting of.* (a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located. However, if the station is licensed for portable-mobile³ operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operator on duty at the transmitter. If a photo copy is used the original license shall be available for inspection

by an authorized Government representative.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, or if the station operated is licensed for portable-mobile³ operation, a verification card⁴ is acceptable in lieu of the posting of such license.

§ 4.166 *Operator requirements.* One or more radio operators holding radiotelephone first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any experimental television broadcast station is located and in actual charge of its operation. The licensed operator on duty and in charge of a broadcast transmitter may at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

§ 4.167 *Antenna structure, marking and lighting.* Where an antenna structure(s) is required to be painted or lighted see § 17.37, *Inspection of tower lights and associated control equipment*; § 17.39, *Cleaning and repainting*; § 17.40, *Time when lights shall be exhibited*; § 17.41, *Spare lamps*; and § 17.42, *Lighting equipment*; of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

§ 4.168 *Additional orders.* In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER RULES RELATING TO OPERATION

§ 4.181 *Station records.* (a) The licensee of each experimental television

³ The term portable-mobile as here used is intended to include any type of portable or mobile operation.

⁴ Form 758-F.

broadcast station shall maintain adequate records of the operation, including:

- (1) Hours of operation.
- (2) Program transmitted.
- (3) Frequency check.
- (4) Pertinent remarks concerning transmission.
- (5) In case of relay or pickup station, an entry giving points of program origination and receiver location shall be included.

(6) Research and experimentation conducted.

(b) Where an antenna structure(s) is required to be illuminated see § 17.38, *Recording of tower light inspections in the station record*, of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

(c) Station records shall be retained for a period of two years.

§ 4.182 *Charges*. No charges, either direct or indirect, shall be made by the licensee of an experimental television broadcast station for the production or transmission of either aural or visual programs transmitted by such station except that this section shall not apply to the transmission of commercial programs by an experimental television relay or pickup broadcast station for retransmission by a television broadcast station.

§ 4.183 *Station identification*. Each experimental television broadcast station shall make aural and visual announcements of its call letters and location at the beginning and end of each period of operation, and during operation, at least once every hour.

§ 4.184 *Rebroadcasts*. (a) The term "rebroadcast" means reception by radio of the program⁶ of a radio station, and the simultaneous or subsequent retransmission of such program by a broadcast station.⁶

(b) No licensee of any experimental television broadcast station shall re-

broadcast the program of any radio station without written authority having first been obtained from the Commission upon application.⁷

(c) An application for authority to rebroadcast the program of any radio station shall be accompanied by written consent or certification of consent of the licensee of the station originating the program.

SUBPART B—RULES GOVERNING EXPERIMENTAL FACSIMILE BROADCAST STATIONS

SOURCE: §§ 4.201 to 4.284 appear at 20 F. R. 4466, June 25, 1955, except as otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 4.201 *Definition*. The term "facsimile broadcast station" means a station licensed to transmit images of still objects for record reception by the general public.

§ 4.202 *Frequency assignment*. (a) Frequencies allocated to broadcasting and the various categories of broadcast auxiliary stations, in the Commission's Table of Frequency Allocations (Part 2 of this chapter), may be assigned respectively to experimental facsimile broadcast or experimental facsimile broadcast auxiliary stations.

(b) More than one frequency may be assigned upon a satisfactory showing of the need therefor.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the least likelihood of interference to established stations, shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to broadcasting or the various categories of broadcast auxiliary stations, the Commission may authorize an experimental facsimile broadcast station of any class to operate on other frequencies upon a satisfactory showing of the need therefor and a showing that the proposed operation can be conducted without causing harmful interference to established services: *Provided, however*, That experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies, will not be authorized prior to a determination by the Commission that the

⁶ As used in this section the word "program" includes any complete program or part thereof.

⁷ In case a program is transmitted from its point of origin to a broadcast station primarily by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast. The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

⁷ Informal application may be employed.

development of such apparatus or the rendition of such service would serve the public interest.

[21 F. R. 3064, May 8, 1956]

RULES GOVERNING ADMINISTRATIVE PROCEDURE

§ 4.211 *Administrative procedure.* See §§ 4.11 to 4.23, inclusive.

§ 4.212 *Supplementary statements to be filed with application for construction permit.* A supplementary statement shall be filed with and made a part of each application for construction permit for any experimental facsimile broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only,

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on,

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation,

(d) That any frequency which may be assigned is subject to change without advance notice or hearing,

(e) That any authorization issued pursuant to the application may be cancelled at any time without notice or hearing.

§ 4.213 *Supplemental report with renewal application.* A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following:

(a) Number of hours operated for transmission of facsimile programs.

(b) Comprehensive report of research and experimentation conducted.

(c) Conclusions and program for further developments of the facsimile broadcast service.

(d) All developments and major changes in equipment.

(e) Any other pertinent developments.

RULES RELATING TO LICENSING POLICIES

§ 4.231 *Licensing requirements, necessary showing.* (a) An applicant for a construction permit for a new experimental facsimile broadcast station, change in facilities of any existing station, or modification of license is re-

quired to make a satisfactory showing of compliance with the general requirements of the Communications Act of 1934, as amended, as well as with regard to the following:

(1) That the applicant has a program of research and experimentation which indicates reasonable promise of substantial contribution to the development of the facsimile broadcast service.

(2) That sufficient facsimile recorders will be distributed to accomplish the experimental program proposed.

(3) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license for an experimental facsimile broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the Commission will determine and specify the time division.

§ 4.232 *Power limitations.* Experimental facsimile broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 4.233 *Emission authorized.* In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out fully the needs shall be made by informal application.

§ 4.234 *Multiple ownership.* No persons (including all persons under common control) shall control directly or indirectly, two or more experimental facsimile broadcast stations unless a showing is made that the character of the programs of research require a licensing of two or more separate stations.

RULES RELATING TO EQUIPMENT

§ 4.251 *Equipment changes.* The licensee of an experimental facsimile broadcast station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

RULES RELATING TO TECHNICAL OPERATION

§ 4.261 *Frequency tolerance.* The licensee of an experimental facsimile broadcast station shall maintain the operating frequency of its station within plus or minus 0.01 percent of the assigned frequency.¹ However, where a lesser tolerance is necessary in order to prevent interference, the Commission will specify the tolerance.

§ 4.262 *Frequency monitors and measurements.* The licensee of an experimental facsimile broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

§ 4.263 *Time of operation.* (a) A licensee of an experimental facsimile broadcast station is not required to adhere to a regular schedule of operation but shall actively conduct a program of research and experimentation.

(b) The program of research and experimentation as offered by an applicant in compliance with the requirements for obtaining a license for an experimental facsimile broadcast station

¹ Tolerance may be plus or minus 0.05 percent on equipment installed prior to October 1, 1946, and until October 1, 1947, when all experimental facsimile broadcast stations shall maintain frequency within the prescribed tolerance.

shall be adhered to in the main, unless the licensee is authorized to do otherwise by the Commission.

(c) The Commission may from time to time require that a station licensed experimentally conduct such experiments as are deemed desirable and reasonable for the development of the service.

§ 4.264 *Station inspection.* The licensee of each experimental facsimile broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 4.265 *Station and operator licenses; posting of.* (a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, a verification card² is acceptable in lieu of the posting of such license.

§ 4.266 *Operator requirements.* One or more radio operators holding radiotelephone first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any experimental facsimile broadcast station is located and in actual charge of its operation. The licensed operator on duty and in charge of a broadcast transmitter may at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

§ 4.267 *Antenna structure, marking and lighting.* Where an antenna structure(s) is required to be painted or lighted see § 17.37, *Inspection of tower lights and associated control equipment;* § 17.39, *Cleaning and repainting;* § 17.40,

² Form 758-F.

Time when lights shall be exhibited; § 17.41, Spare lamps; and § 17.42, Lighting equipment; of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

§ 4.268 *Additional orders.* In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER RULES RELATING TO OPERATION

§ 4.281 *Station records.* (a) The licensee of each experimental facsimile broadcast station shall maintain adequate records of the operation, including:

- (1) Hours of operation.
- (2) Program transmitted.
- (3) Frequency check.
- (4) Pertinent remarks concerning transmission.
- (5) Research and experimentation conducted.

(b) Where an antenna structure(s) is required to be illuminated see § 17.38, *Recording of tower light inspections in the station record*, of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

(c) Station records shall be retained for a period of two years.

§ 4.282 *Charges.* (a) A licensee of an experimental facsimile broadcast station shall not make any charge, directly or indirectly, for the transmission of programs.

(b) No licensee of any standard or FM broadcast station shall make any additional charge, directly or indirectly, for the transmission of some phase of its programs by an associated experimental facsimile broadcast station.

§ 4.283 *Station identification.* Each experimental facsimile broadcast station shall transmit visual information which will permit it to be identified at the beginning and end of each period of operation, and during operation, at least once every hour.

§ 4.284 *Rebroadcasts.* (a) The term "rebroadcast" means reception by radio of the program⁴ of a radio station, and

⁴ As used in this section the word "program" includes any complete program or part thereof.

the simultaneous or subsequent retransmission of such program by a broadcast station.⁴

(b) No licensee of any experimental facsimile broadcast station shall rebroadcast the program of any radio station without written authority having first been obtained from the Commission upon application.⁵

(c) An application for authority to rebroadcast the program of any radio station shall be accompanied by written consent or certification of consent of the licensee of the station originating the program.

SUBPART C—RULES GOVERNING DEVELOPMENTAL BROADCAST STATIONS

SOURCE: §§ 4.301 to 4.384 appear at 20 F. R. 4467, June 25, 1955, except as otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 4.301 *Definition.* The term "developmental broadcast station" means a station licensed experimentally to carry on development and research primarily in radiotelephony for the advancement of the broadcast services.

§ 4.302 *Frequency assignment.* (a) Frequencies allocated to the various classes of aural broadcasting stations and broadcast auxiliary stations, in the Commission's Table of Frequency Allocations (Part 2 of this chapter), may be assigned to developmental broadcast stations.

(b) More than one frequency may be assigned upon a satisfactory showing of the need therefor.

(c) Frequencies best suited to the purpose of the experimentation and on which there appears to be the least likelihood of interference to established stations, shall be selected.

(d) In a case of important experimentation which cannot be feasibly conducted on frequencies allocated to the various classes of aural broadcasting stations and broadcast auxiliary stations, the Commission may authorize a developmental broadcast station to operate on

⁴ In case a program is transmitted from its point of origin to a broadcast station primarily by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast. The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

⁵ Informal application may be employed.

other frequencies upon a satisfactory showing of the need therefor and a showing that the proposed operation can be conducted without causing harmful interference to established services: *Provided, however,* That experimental operation which looks toward the development of radio transmitting apparatus or the rendition of any type of regular service using such frequencies, will not be authorized prior to a determination by the Commission that the development of such apparatus or the rendition of such service would serve the public interest.

[21 F. R. 3064, May 8, 1956]

RULES GOVERNING ADMINISTRATIVE PROCEDURE

§ 4.311 *Administrative procedure.* See §§ 4.11 to 4.23, inclusive.

§ 4.312 *Supplementary statements to be filed with application for construction permit.* A supplementary statement shall be filed with and made a part of each application for construction permit for any developmental broadcast station confirming the applicant's understanding:

(a) That all operation upon the frequency requested is for experimental purposes only,

(b) That the frequency requested may not be the best suited to the particular experimental work to be carried on, and

(c) That the frequency requested need not be allocated for any service that may be developed as a result of the experimental operation,

(d) That any frequency which may be assigned is subject to change without advance notice or hearing,

(e) That any authorization issued pursuant to the application may be cancelled at any time without notice or hearing.

§ 4.313 *Supplemental report with renewal application.* A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following, among others:

(a) The number of hours operated.

(b) Comprehensive report on research and experiments conducted.

(c) Conclusions and program for further development of the broadcast service.

(d) All developments and major changes in equipment.

(e) Any other pertinent developments.

RULES RELATING TO LICENSING POLICIES

§ 4.331 *Licensing requirements; necessary showing.* (a) An applicant for a construction permit for a new developmental broadcast station, change of facilities or modification of an existing license is required to make a satisfactory showing of compliance with the general requirements of the Communications Act of 1934, as amended, as well as with regard to the following:

(1) That the applicant has a program of research and experimentation which can best be carried on under the license requested.

(2) That the program of research has reasonable promise of substantial contribution to the development of broadcasting.

(3) That the program of research and experimentation will be conducted by qualified personnel.

(b) A license for a developmental broadcast station will not authorize exclusive use of any frequency. In case interference would be caused by simultaneous operation of stations licensed experimentally, such licensees shall endeavor to arrange satisfactory time division. If such agreement cannot be reached, the Commission will determine and specify the time division.

§ 4.332 *Power limitations.* Developmental broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 4.333 *Emission authorized.* In case emission of a different type than that specified in the license is necessary or desirable in carrying on any phases of experimentation, application setting out

fully the needs shall be made by informal application.

RULES RELATING TO EQUIPMENT

§ 4.351 *Equipment changes.* The licensee of a developmental broadcast station may make any changes in the equipment that are deemed desirable or necessary: *Provided*,

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed. This limitation shall not apply to developmental broadcast stations licensed to operate in connection with the development and testing of commercial broadcast equipment.

RULES RELATING TO TECHNICAL OPERATION

§ 4.361 *Frequency tolerance.* The licensee of a developmental broadcast station operating below 450 megacycles shall maintain the operating frequency of its station within plus or minus 0.01 percent of the assigned frequency.³ The licensee of a developmental broadcast station operating above 450 megacycles shall maintain the operating frequency of its station within plus or minus 0.05 percent of the assigned frequency. However, where a lesser tolerance is necessary in order to prevent interference, the Commission will specify the tolerance.

§ 4.362 *Frequency monitors and measurements.* The licensee of a developmental broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

³ Tolerance may be 0.05 on equipment installed prior to October 1, 1946, and until October 1, 1947, when all developmental broadcast stations shall maintain frequency within the prescribed tolerances.

§ 4.363 *Time of operation.* (a) A licensee of a developmental broadcast station is not required to adhere to a regular schedule of operation but shall actively conduct a program of research and experimentation. However, licensees of developmental broadcast stations which are licensed to conduct special intermittent experiments, such as the development and testing of commercial broadcast equipment, are authorized to operate only when there is a need therefor.

(b) The program of research and experimentation as offered by an applicant in compliance with the requirements for obtaining a license for a developmental broadcast station shall be adhered to in the main, unless the licensee is authorized to do otherwise by the Commission.

(c) The Commission may from time to time require that a station licensed experimentally conduct such experiments as are deemed desirable and reasonable for the development of the service.

§ 4.364 *Station inspection.* The licensee of each developmental broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 4.365 *Station and operator licenses; posting of.* (a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located. However, if the station is licensed for portable-mobile⁴ operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operator on duty at the transmitter. If a photo copy is used the original license shall be available for inspection by an authorized Government representative.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however*, if the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, or if the station operated is licensed for

⁴ The term portable-mobile as here used is intended to include any type of portable or mobile operation.

portable-mobile⁴ operation, a verification card⁵ is acceptable in lieu of the posting of such license.

§ 4.366 *Operator requirements.* One or more radio operators holding radio-telephone, first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any developmental broadcast station is located and in actual charge of its operation. The licensed operator on duty and in charge of a broadcast transmitter may at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

§ 4.367 *Antenna structure, marking and lighting.* Where an antenna structure(s) is required to be painted or lighted see § 17.37, *Inspection of tower lights and associated control equipment*; § 17.39, *Cleaning and repainting*; § 17.40, *Time when lights shall be exhibited*; § 17.41, *Spare lamps*; and § 17.42, *Lighting equipment*; of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

§ 4.368 *Additional orders.* In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER RULES RELATING TO OPERATION

§ 4.381 *Station records.* (a) The licensee of each developmental broadcast station shall maintain adequate records of the operation, including:

- (1) Hours of operation.
- (2) Program transmitted.
- (3) Frequency check.
- (4) Pertinent remarks concerning transmission.

(5) In case of relay or remote pickup station, an entry giving points of program origination and receiver location shall be included.

(6) Research and experimentation conducted.

(b) Where an antenna structure(s) is required to be illuminated see § 17.38,

Recording of tower light inspections in the station record, of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

(c) Station records shall be retained for a period of two years.

§ 4.382 *Program service; charges prohibited; announcements.* (a) A licensee of a developmental broadcast station shall broadcast programs only when they are necessary to the experiments being conducted. No regular program service shall be broadcast unless specifically authorized. If the license authorizes the carrying of programs, the developmental broadcast station may transmit the programs of a standard, or FM broadcast station or networks, provided, that during the broadcast a statement is made identifying the station or network originating the program (by giving the call letters of the station or name of the network) and announcing that the program is being broadcast in connection with the experimental operation of a developmental broadcast station.

(b) No licensee of any standard, or FM broadcast station shall make any additional charge, directly or indirectly, for the transmission of programs by a developmental broadcast station.

(c) The provisions of paragraphs (a) and (b) of this section shall be applicable to rebroadcasts of the programs of a standard or FM broadcast station or network by a developmental broadcast station.

§ 4.383 *Station identification.* Each developmental broadcast station shall announce its call letters at the beginning and end of each period of operation, and during operation, at least once every hour.

§ 4.384 *Rebroadcasts.* (a) The term "rebroadcast" means reception by radio of the program⁶ of a radio station, and the simultaneous or subsequent retransmission of such program by a broadcast station.⁷

⁶ As used in this section the word "program" includes any complete program or part thereof.

⁷ In case a program is transmitted from its point of origin to a broadcast station primarily by telephone facilities in which a section of such transmission is by radio, the broadcasting of this program is not considered a rebroadcast. The broadcasting of a program relayed by a remote pickup broadcast station is not considered a rebroadcast.

⁸ Informal application may be employed.

⁴ See footnote on p. 361.

⁵ Form 758-F.

(b) No licensee of any developmental broadcast station shall rebroadcast the program of any radio station without written authority having first been obtained from the Commission upon application.⁵

(c) An application for authority to rebroadcast the program of any radio station shall be accompanied by written consent or certification of consent of the licensee of the station originating the program.

SUBPART D—RULES GOVERNING REMOTE PICKUP BROADCAST STATIONS

SOURCE: §§ 4.401 to 4.482 appear at 20 F. R. 4469, June 25, 1955, except as otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 4.401 *Definitions*—(a) *Remote pickup broadcast mobile station*. A land mobile station, licensed for the transmission of program material from remote points of origination to a broadcasting station for simultaneous or delayed broadcasting and for the transmission of orders pertaining to such programs.

(b) *Remote pickup broadcast base station*. A base station licensed for the transmission of program material from remote points of origination to a broadcasting station for simultaneous or delayed broadcasting and for the transmission of orders pertaining to such programs.

(c) *Remote pickup broadcast station*. The term "remote pickup broadcast station" as used in this subpart includes the definitions in paragraphs (a) and (b) of this section.

§ 4.402 *Frequency assignment*. (a) The following frequencies are allocated for assignment to remote pickup broadcast base and mobile stations:

(1)	Group A				
	(kc)				
	1 1606				
	1622				
	1646				
(2)					
	Group D	Group E	Group F	Group G	Group H
	(Mc)	(Mc)	(Mc)	(Mc)	(Mc)
	² 25.87	² 25.91	² 25.95	² 25.99	² 26.03
	26.15	26.17	26.19	26.21	26.23
	26.25	26.27	26.29	26.31	26.33
	26.35	26.37	26.39	26.41	26.43
(3)	Group I		Group J		
	(Mc)		(Mc)		
	² 26.07		² 26.09		
	26.11		26.13		
	26.45		26.47		

(4)	Group K³		
	(Mc)		
	152.87	153.05	153.23
	152.93	153.11	153.29
	152.99	153.17	153.35

(5)	Group L	Group M
	(Mc)	(Mc)
	⁴ 166.25	⁴ 170.15

(6)	Group N			
	(Mc)			
	450.05	450.55	455.05	455.55
	450.15	450.65	455.15	455.65
	450.25	450.75	455.25	455.75
	450.35	450.85	455.35	455.85
	450.45	450.95	455.45	455.95

(b) The following frequencies are allocated for assignment to remote pickup base and mobile stations in the Island of Puerto Rico only:

Mc	Mc	Mc
159.51	159.69	159.87
159.57	159.75	159.93
159.63	159.81	159.99

NOTE: Use of these frequencies by remote pickup stations is subject to the condition that no harmful interference is caused to stations in the Land Transportation Radio Services.

(c) A licensee is not limited with respect to the number of remote pickup broadcast stations which may be licensed for operation in a single area and each such station may be assigned one or more frequencies: *Provided, however*, That such frequency assignments shall be limited to those within a single frequency Group in any subparagraph of

¹ Subject to the condition that no harmful interference is caused to the reception of standard broadcast stations.

² Subject to the condition that no harmful interference is caused to the reception of broadcasting stations.

³ Subject to the condition that no harmful interference is caused to the Industrial Radio Services.

⁴ Operation on the frequencies 166.25 Mc and 170.15 Mc is not authorized (i) within the area bounded on the west by the Mississippi River, on the north by the parallel of latitude 37° 30' N., and on the east and south by that arc of the circle with center at Springfield, Ill., and radius equal to the air-line distance between Springfield, Ill., and Montgomery, Alabama, subtended between the foregoing west and north boundaries; (ii) within 150 miles of New York City, and; (iii) outside the continental United States; and is subject to the condition that no harmful interference is caused to government radio stations in the band 162–174 Mc.

paragraph (a) of this section. This limitation does not preclude the assignment of frequencies listed in different subparagraphs to the same licensee. Applicants shall request the assignment of only those frequencies on which operation is contemplated and the transmitter shall be suitably equipped to operate on all assigned frequencies.

(d) Remote pickup broadcast stations will not be granted exclusive frequency assignments, and the same frequency or frequencies may be assigned to other licensees in the same area.

(Sec. 303, 48 Stat. 1082, as amended; 47 U. S. C. 303)

CODIFICATION: In § 4.402, paragraphs (b) and (c) were amended to read as set forth above, and paragraph (d) was added, 21 F. R. 198, Jan. 10, 1956.

§ 4.403 *Frequency selection to avoid interference.* (a) Where two or more remote pickup broadcast stations are licensed for the same frequency or group of frequencies in the same area and when simultaneous operation is contemplated, the licensees shall endeavor to select frequencies or schedule operation in such manner as to avoid mutual interference. If a mutual agreement to this effect cannot be reached the Commission shall be notified and it will specify the frequency or frequencies on which each station is to be operated.

(b) The following order of priority of transmissions shall be observed on all frequencies except those listed in § 4.402 (a) (3): (1) The transmission of program material for broadcast, (2) the transmission of orders immediately necessary thereto, and (3) other transmissions permitted under § 4.431 (a). On frequencies listed in § 4.402 (a) (3), transmissions permitted under § 4.431 shall have priority over transmissions permitted under § 4.432 (e).

RULES GOVERNING ADMINISTRATIVE PROCEDURE

§ 4.411 *Administrative procedure.* See §§ 4.11 to 4.23, inclusive.

RULES RELATING TO LICENSING POLICIES

§ 4.431 *Purpose of remote pickup broadcast stations.* (a) The license of a remote pickup broadcast station authorizes the transmission of program material, orders concerning such program material, and related communications necessary to the accomplishment of such transmissions, to an associated

broadcast station,⁵ to such other stations as are also broadcasting the same program material, or to the network with which the broadcast station is regularly affiliated. A license issued within the provisions of § 4.432 (e) authorizes the additional communications therein provided. Remote pickup broadcast stations may be operated in conjunction with other broadcast stations not aforementioned: *Provided*, That the transmissions by the remote pickup broadcast station shall be under the control of the remote pickup broadcast station licensee, and that such operation shall not exceed a total of 10 days in any 30-day period.

(b) In the event of damage or impairment of the regular circuits of a broadcast station due to storms or other emergencies, remote pickup broadcast stations may be used to provide temporary emergency circuits for program transmission and cue purposes pending completion of repairs. However, remote pickup broadcast stations may not be used for such circuits on a regular basis.

(c) The license of a remote pickup broadcast station authorizes operation on only one of the assigned frequencies at any one time. A licensee may operate two or more remote pickup broadcast stations simultaneously. Remote pickup broadcast stations may be used to transmit orders and related communications from the program control point to the remote pickup point.

(d) Remote pickup broadcast stations licensed in Alaska, Hawaii, Puerto Rico, and the Virgin Islands of the United States may be used for any auxiliary broadcast purpose including inter-city relay circuits which may be operated by the licensee for the purpose of maintaining studios at locations other than that of the main studio: *Provided, however*, That such stations shall not be used for transmissions intended to be received by the public directly.

§ 4.432 *Licensing requirements.* (a) A license for a remote pickup broadcast station will be issued only to the licensee of a broadcast station. Remote pickup broadcast stations will be licensed to television broadcast stations upon an interim basis pending development of equipment capable of transmitting the aural and the visual portions of television

⁵ The term "associated broadcast station" as used herein means a broadcast station with which the remote pickup station is licensed as an auxiliary facility.

programs within the bands of frequencies allocated for television pickup stations. A separate license is required for each remote pickup broadcast station. Each application for construction permit for a new remote pickup broadcast station or for a change in the facilities of an existing station shall be specific with regard to the frequency or frequencies requested.

(b) In case a licensee has two or more broadcast stations of different services (standard, FM, television, etc.) located in the same city, it shall, in applying for a new remote pickup broadcast station or for renewal of license of an existing station, designate each of the stations with which the remote pickup broadcast station is to be operated.

(c) In case a licensee has two or more broadcast stations located in different cities, it shall, in applying for a new remote pickup station or for renewal of license of an existing station, designate the broadcast station, or stations under the provisions of paragraph (b) of this section, in conjunction with which the remote pickup station is to be operated.

(d) A remote pickup broadcast station may be licensed for portable or mobile operation in accordance with § 4.401 (a), or for operation at a fixed location in accordance with § 4.401 (b). An application for a new remote pickup broadcast station or for modification of license of an existing station requesting portable or mobile operation shall specify the area in which the proposed station is intended to be employed.

(e) Remote pickup broadcast base stations will be licensed for the purpose of providing communication between the studio and the transmitter of broadcast stations which utilize a broadcast STL station for program transmission, provided that such operation shall not be conducted on frequencies other than those listed in § 4.402 (a) (3). The term "broadcast STL station" as used in this section includes "FM broadcast STL", "standard broadcast STL", and "television STL" stations.

§ 4.433 Temporary authorizations.

(a) Special temporary authority may be granted for operation, as a remote pickup broadcast station, of equipment already licensed to another class of station or equipment in use by a class of station which under the Communications Act of 1934 does not require a construction permit.

(b) An application for special temporary authority for the operation of a remote pickup broadcast station⁶ shall be filed with the Commission at least 10 days previous to the date of operation. Any application received within less than 10 days may be accepted upon due showing of sufficient reasons for the delay in submitting such request. The application shall set forth full particulars of the purpose for which the request is made and shall show the licensee, call letters, and type of equipment of the station proposed to be used and specify the frequency or frequencies, time and date, location, transmitter power, and type emission proposed and the purpose of the operation requested.

(c) An application for special temporary authority to operate another class of station as a remote pickup broadcast station⁶ shall specify a frequency or frequencies allocated in § 4.402: *Provided, however*, In case of events of national interest and importance which cannot be transmitted successfully on these frequencies, other frequencies under the jurisdiction of the Commission may be requested, if it is shown that the operation thereon will not cause interference to established stations: *And provided further*, That no remote pickup operation will be authorized on frequencies employed in the emergency service or otherwise employed for the safety of life and property.

(d) An application for special temporary authority to operate equipment as a remote pickup broadcast station⁶ filed by a person other than the licensee of such equipment shall contain a statement to show that temporary control of the transmissions therefrom has been secured for the duration of the special operation proposed. An application for special temporary authority to operate another class of station as a remote pickup broadcast station filed by a person other than the licensee of a standard or FM broadcast station shall contain a statement to show which broadcast station or stations contemplate broadcast of the program proposed to be transmitted.

§ 4.434 Remote control operation. Remote-control operation of remote pickup stations will be permitted subject to the following conditions.

⁶ Informal application may be employed.

(a) A percentage modulation indicator or calibrated program level meter shall be provided at the operating position.

(b) The operator shall have off-and-on control of the power to the last radio stage.

(c) The transmitter shall be so installed and protected that it is not accessible to other than duly authorized persons.

§ 4.435 Power limitations. Remote pickup broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 4.436 Emission authorized. (a) The license for a remote pickup broadcast station operating on frequencies below 25 Mc. will normally authorize A3 emission and may in addition authorize A1 and A2 emission where a need therefor is shown. A license for a remote pickup broadcast station operating on frequencies above 25 Mc. will authorize A3 or F3 emission, depending upon the equipment employed. Stations licensed to employ F3 emission shall limit the frequency swing¹ so that the bandwidth of emission will conform to the requirements of the channel widths authorized as follows:

(1) For stations operating on the frequencies 26.11 to 26.47 Mc., 20 kilocycles.

(2) For stations operating on the frequencies 152.87 to 153.35, 159.51 to 159.99, 166.25, and 170.15 Mc, 60 kilocycles.

[Subparagraph (2) amended, 21 F. R. 199, Jan. 10, 1956]

(3) For stations operating on the frequencies 450.05 to 451.95 Mc., 100 kilocycles.

¹ The term "frequency swing" means the instantaneous departure of the frequency of the emitted wave from the center frequency resulting from modulation.

(b) Any emissions outside the authorized channel shall be limited to such an extent as not to constitute a source of potential interference to other stations and in no event shall such emissions be in excess of minus 40 decibels as compared to the emissions within the authorized channel.

RULES RELATING TO EQUIPMENT

§ 4.451 Equipment changes. The licensee of a remote pickup broadcast station may make any changes in the equipment that are deemed desirable or necessary: *Provided*,

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

RULES RELATING TO TECHNICAL OPERATION

§ 4.461 Frequency tolerance. The licensee of a remote pickup broadcast station shall maintain the operating frequency of its station in accordance with the following:^a

Frequency range	Tolerance (percent)	
	Base station	Mobile station
1606 to 2830 kc:		
200 watts or less.....	.01	.02
Over 200 watts ¹005	.02
26.11 to 26.47 Mc:		
5 watts or less.....	.005	.02
Over 5 watts.....	.005	.005
152.87 to 153.35, 159.51 to 159.99, 166.25, and 170.15 Mc:		
5 watts or less.....	.005	.01
Over 5 watts.....	.005	.005
450.05 to 451.95 Mc: All powers.....	.01	.01

¹ The listing of tolerance for power over 200 watts is in accordance with treaty values and shall not be construed as a finding that such power will be authorized.

[21 F. R. 199, Jan. 10, 1956]

^a Remote pickup broadcast stations now operating in the frequency range 30-40 Mc. and on frequencies above 154 Mc. will, during the period such operation continues pending frequency re-assignment of these stations pursuant to the proceedings in Docket No. 6651, retain the frequency tolerance requirements of their present licenses.

§ 4.462 Frequency monitors and measurements. (a) The licensee of a remote pickup broadcast station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

(b) Each frequency for which the remote pickup broadcast station is licensed shall be measured at least once during each calendar year.⁹

§ 4.463 Station inspection. The licensee of each remote pickup broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 4.464 Station and operator licenses; posting of. (a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located: *Provided:*

(1) If the transmitter operator is located at a distance from the transmitter pursuant to § 4.434 the station license shall be posted in the above-described manner at the operating position.

(2) If the station is licensed for portable-mobile¹⁰ operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operator on duty at the transmitter. If a photo copy is used the original license shall be available for inspection by an authorized Government representative.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an au-

thorized Commission representative, or if the station operated is licensed for portable-mobile¹⁰ operation, a verification card¹¹ is acceptable in lieu of the posting of such license: *Provided further, however,* That if the operator on duty holds a restricted radiotelephone operator permit of the card form (as distinguished from the diploma form) he shall not post that permit but shall keep it in his personal possession.

§ 4.465 Operator requirements. One or more radio operators holding any class of commercial radio operator license or permit shall be on duty at the place where the transmitting apparatus of any remote pickup broadcast station is located, except as provided in § 4.434, and in actual charge of its operation. Further provisions and restrictions concerning the operator's authority are contained in Part 13 of this chapter. The licensed operator on duty and in charge of a broadcast transmitter may at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

§ 4.466 Antenna structure, marking and lighting. Where an antenna structure(s) is required to be painted or lighted see § 17.37, *Inspection of tower lights and associated control equipment*; § 17.39, *Cleaning and repainting*; § 17.40, *Time when lights shall be exhibited*; § 17.41, *Spare lamps*; and § 17.42, *Lighting equipment*; of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

§ 4.467 Additional orders. In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders, in each case as may be deemed necessary.

OTHER RULES RELATING TO OPERATION

§ 4.481 Station records. (a) The licensee of each remote pickup broadcast

⁹ Remote pickup broadcast stations licensed for frequencies that are subject to change in accordance with the proceedings in Docket No. 6651 are required to measure only those frequencies on which they are equipped to operate.

¹⁰ The term portable-mobile as here used is intended to include any type of portable or mobile operation.

¹¹ Form 758-F.

station shall maintain adequate records of the operation, including:

- (1) Hours of operation.
- (2) Program transmitted.
- (3) Frequency check.
- (4) Pertinent remarks concerning transmission.
- (5) An entry giving points of program origination and receiver location.

(b) Where an antenna structure(s) is required to be illuminated see § 17.38, *Recording of tower light inspections in the station record*, of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

(c) Station records shall be retained for a period of two years.

§ 4.482 *Station identification.* Each remote pickup broadcast station shall announce its call letters at the beginning and end of each period of operation, and during operation, at least once every hour it shall either announce its call letters or make an announcement¹² which will permit it to be identified.

SUBPART E—BROADCAST STL AND FM INTERCITY RELAY STATIONS

SOURCE: §§ 4.501 to 4.582 appear at 20 F. R. 4474, June 25, 1955.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 4.501 *Definitions.* (a) **FM Broadcast STL Station:** A fixed station utilizing telephony to transmit from a studio of an FM broadcasting station to the transmitter of that broadcasting station, programs to be broadcast by that station.

(b) **Standard broadcast STL station:** A fixed station utilizing telephony to transmit from a studio of a standard broadcasting station to the transmitter of that broadcasting station, programs to be broadcast by that station.

(c) **FM intercity relay station:** A fixed station used for the transmission of FM broadcasting programs from one FM broadcasting station to other FM broadcasting stations to provide simultaneous network FM broadcasting and operated only by FM broadcast licensees.

(d) The term "FM broadcasting station" as used in this part of the rules

¹² Such as announcement during program operation of the call letters of the broadcast station with which the remote pickup broadcast station is regularly affiliated.

includes non-commercial educational FM broadcasting stations.

(e) The abbreviation "STL" is derived from "studio-transmitter link."

§ 4.502 *Frequency assignment.* (a) An FM broadcast STL station may be licensed on one of the following frequencies:

940.5 Mc	943.5 Mc	946.5 Mc	949.5 Mc
941.0 Mc	944.0 Mc	947.0 Mc	950.0 Mc
941.5 Mc	944.5 Mc	947.5 Mc	950.5 Mc
942.0 Mc	945.0 Mc	948.0 Mc	951.0 Mc
942.5 Mc	945.5 Mc	948.5 Mc	951.5 Mc
943.0 Mc	946.0 Mc	949.0 Mc	

(b) A standard broadcast STL station may be licensed on one of the following frequencies:¹

925.5 Mc	929.5 Mc	933.0 Mc	936.5 Mc
926.0 Mc	930.0 Mc	933.5 Mc	937.0 Mc
926.5 Mc	930.5 Mc	934.0 Mc	937.5 Mc
927.0 Mc	931.0 Mc	934.5 Mc	938.0 Mc
927.5 Mc	931.5 Mc	935.0 Mc	938.5 Mc
928.0 Mc	932.0 Mc	935.5 Mc	939.0 Mc
928.5 Mc	932.5 Mc	936.0 Mc	939.5 Mc
929.0 Mc			

Stations operating in the band 925–940 Mc must accept any interference that may be experienced from the operation of industrial, scientific and medical equipment.

(c) The frequencies listed in paragraph (b) of this section may be assigned to FM broadcast STL stations in any area where insufficient space in that area is available in the band 940–952 Mc.

(d) FM intercity relay stations may be licensed on any of the frequencies listed in paragraphs (a) and (b) of this section, subject to the condition that no harmful interference is caused to stations operating in accordance with the Table of Frequency Allocations contained in § 2.104 (a) of this chapter.

§ 4.503 *Frequency selection.* (a) Each application for a new station or change in an existing station shall be specific with regard to frequency. In general, the lowest suitable frequency will be assigned which, on an engineering basis, will not cause harmful interference to other stations operating in accordance with existing frequency allocations.

(b) Where it appears that interference may result from the operation of a new station or a change in the facilities of an existing station, the Commission

¹ Shared with other services. See § 2.104 (a) of this chapter.

may require a showing that harmful interference will not be caused to existing stations or that if interference will be caused the need for the proposed service outweighs the loss of service due to the interference.

RULES GOVERNING ADMINISTRATIVE PROCEDURE

§ 4.511 *Administrative procedure.* Sec. §§ 4.11 to 4.23 inclusive.

RULES RELATING TO LICENSING POLICIES

§ 4.531 *Licensing requirements.* (a) An FM broadcast STL station will be licensed only to the licensee of an FM broadcasting station as an auxiliary to a particular FM broadcasting station of that licensee.

(b) A standard broadcast STL station will be licensed only to the licensee of a standard broadcast station as an auxiliary to a particular standard broadcast station of that licensee.

(c) An FM intercity relay station will be licensed only to the licensee of an FM broadcast station and only upon a satisfactory showing that suitable common carrier facilities are not available. An application for construction permit for a new FM intercity relay station or for renewal of license of an existing station shall be accompanied by a verified statement containing the following:

(1) A full statement as to why the applicant requires the requested facilities including reasons why common carrier facilities cannot be utilized; and,

(2) A showing that the applicant has, at the earliest time reasonably practicable, requested the appropriate common carrier or common carriers serving the general area involved to furnish the intercity FM transmission service required by the applicant, including in such showing a copy of the request or requests and of the reply or replies received from such common carriers.

(d) More than one broadcast STL station or FM intercity relay stations will be licensed for use with single broadcast station only upon a showing that, (1) more than one transmitter is required for the effective operation of a single STL or intercity relay circuit due to distance of transmission, terrain anomalies, or similar circumstances; or, (2) more than one STL circuit is needed to connect additional studios or more than one FM intercity relay circuit is needed to connect additional FM broadcast stations in

the network; and it is shown that the nature and extent of use of such additional circuits is such as to justify their authorization.

(e) Each station shall be licensed at a fixed location and the direction of radiation of the antenna shall be fixed.

§ 4.532 *Service.* (a) The license of an FM broadcast STL station or a standard broadcast STL station authorizes the relaying of programs from a studio to the transmitter of the broadcast station with which it is licensed, for simultaneous or delayed broadcast: *Provided, however,* That where the licensee of an FM broadcast STL station or a standard broadcast STL station is the licensee of an FM broadcast station and a standard broadcast station in the same city or metropolitan district, the license of each such STL station authorizes the relaying to be made to either or both such broadcast stations.

(b) The license of an FM intercity relay station authorizes the relaying of FM broadcast programs and communications relating thereto between FM broadcasting stations located in different cities in order to provide network FM broadcasting. The operation of FM intercity relay stations is subject to the condition that no harmful interference is caused to other radio stations, present or future, operating in accordance with the Table of Frequency Allocations set forth in § 2.104 (a) of this chapter.

(c) Each FM broadcast STL station, standard broadcast STL station, or FM intercity relay station will be licensed for unlimited time operation.

(d) During periods in which it is not a part of the broadcast circuit, the transmitting equipment may be used for the transmission of communications which pertain to the broadcast operations.³ Superfluous transmissions are not permitted.

§ 4.533 *Remote control and untended operation.* (a) Broadcast STL

³ If the transmitter and receiver are equipped with a multiplex circuit, communications during broadcast periods may be authorized upon application therefor. Such a circuit, if used, shall be designed and operated in a manner which will not cause spurious emissions or derogation of the program transmission. Studio to transmitter and transmitter to studio communication may also be provided by equipment operated under the remote pickup broadcast station rules.

or FM intercity relay stations may be operated by remote control: *Provided*, That such operation is conducted in accordance with the conditions listed in this section: *And provided further*, That the Commission is notified at least 10 days prior to such operation and that such notification is accompanied by a detailed description of the proposed remote control installation showing the manner of compliance with the following conditions:

(1) The operating position shall be under the control and supervision of the licensee and shall be the place at which a licensed operator meeting the requirements of § 4.565 and responsible for the operation of the transmitter is stationed;

(2) A carrier operated device shall be provided at the operating position which shall give a continuous visual indication when the transmitter is radiating; or, in lieu thereof, a device shall be provided which will give a continuous visual indication when any transmitter control circuits have been placed in a condition to produce radiation;

(3) Facilities shall be provided at the operating position which will permit the operator to turn the transmitter carrier on and off at will; and

(4) The transmitter and all of its operating controls shall be so installed and protected that they are not accessible to other than authorized personnel.

(b) FM intercity relay stations, and broadcast STL stations where the circuit requires the use of more than one STL transmitter, may be operated unattended: *Provided*, That such operation is conducted in accordance with the conditions listed below: *And provided further* That the Commission is notified at least 10 days prior to the beginning of such operation and that such notification is accompanied by a detailed description of the proposed installation showing the manner of compliance with the following conditions:

(1) The transmitter is capable of retransmitting by self-actuating means a radio signal received from another radio station or stations;

(2) The transmitter shall be provided with adequate safeguards to prevent improper operation of the equipment;

(3) The transmitter shall be so installed and protected that it is not accessible to other than duly authorized persons;

(4) Appropriate observations shall be made, at intervals not exceeding one hour during the period of its operations, at the receiving end of the circuit by a person holding a valid first or second class radiotelephone operator license who shall immediately institute measures sufficient to assure prompt correction of any condition of improper operation that is observed; and

(5) The station licensee shall remain responsible for the proper operation of the station, and all adjustments or tests during or coincident with the installation, servicing, or maintenance of the station which may affect its proper operation, shall be performed by or under the immediate supervision and responsibility of a person holding a valid first or second class radiotelephone operator license.

(c) The Commission may notify the licensee not to commence remote control or unattended operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience and necessity.

§ 4.534 *Power limitations.* Broadcast STL and FM intercity relay stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 5 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 4.535 *Emission authorized.* (a) Broadcast STL and FM intercity relay stations normally will be authorized to employ frequency modulation only.

(b) The maximum frequency swing^{*} employed shall not be in excess of 200 kilocycles.

§ 4.536 *Directional antenna required.* Each broadcast STL or FM intercity relay station is required to employ a direc-

^{*} The term "frequency swing" means the instantaneous departure of the frequency of the emitted wave from the center frequency resulting from modulation.

tional antenna. Considering one kilowatt of radiated power as a standard for comparative purposes, such antenna shall provide a free space field intensity at one mile of not less than 435 mv/m in the main lobe of radiation toward the receiver and not more than 20 percent of the maximum value in any azimuth 30 degrees or more off the line to the receiver. Where more than one antenna is authorized for use with a single station, the radiation pattern of each shall be in accordance with the foregoing requirement.

RULES RELATING TO EQUIPMENT

§ 4.551 *Equipment changes.* The licensee of a broadcast STL or FM intercity relay station may make any changes in the equipment that are deemed desirable or necessary provided:

(a) That the operating frequency is not permitted to deviate more than the allowed tolerance;

(b) That the emissions are not permitted outside the authorized band;

(c) That the power output complies with the license and the regulations governing the same; and

(d) That the transmitter as a whole or output power rating of the transmitter is not changed.

RULES RELATING TO TECHNICAL OPERATION

§ 4.561 *Frequency tolerance.* The licensee of each broadcast STL or FM intercity relay station shall maintain the operating frequency of the station within plus or minus 0.005 percent of the assigned frequency.

§ 4.562 *Frequency monitors and measurements.* The licensee of a broadcast STL or FM intercity relay station shall provide the necessary means for determining that the frequency of the station is within the allowed tolerance. The date and time of each frequency check, the frequency as measured, and a description or identification of the method employed shall be entered in the station log. Sufficient observations shall be made to insure that the assigned carrier frequency is maintained within the prescribed tolerance.

§ 4.563 *Station inspection.* The licensee of each broadcast STL or FM intercity relay station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 4.564 *Station and operator license; posting of.* (a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible, in a conspicuous place in the room in which the transmitter is located: *Provided*, That if the transmitter operator is located at a distance from the transmitter pursuant to § 4.533 the station license shall be posted in the above-described manner at the operating position.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however*, If the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and is there available for inspection by an authorized Commission representative, a verification card (Form 758-F) is acceptable in lieu of the posting of such license: *Provided further, however*, That if the operator on duty holds a restricted radiotelephone operator permit of the card form (as distinguished from the diploma form) he shall not post that permit but shall keep it in his personal possession.

§ 4.565 *Operator requirements.* One or more radio operators holding any class of commercial radio operator license or permit shall be on duty at the place where the transmitting apparatus is located, except as provided in § 4.533, and in actual charge of its operation. Further provisions and restrictions concerning the operator's authority are contained in Part 13 of this chapter. The licensed operator on duty and in charge of a broadcast transmitter may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operator's license which he holds and the rules and regulations governing such stations. However, such duties shall in no wise interfere with the operation of the broadcast transmitter.

§ 4.566 *Antenna structure, marking and lighting.* Where an antenna structure(s) is required to be painted or lighted see § 17.37, *Inspection of tower lights and associated control equipment*; § 17.39, *Cleaning and repainting*; § 17.40, *Time when lights shall be exhibited*;

§ 17.41, *Spare lamps*; and § 17.42, *Lighting equipment*; of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

§ 4.567 *Additional orders*. In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

OTHER RULES RELATING TO OPERATION

§ 4.581 *Station records*. (a) The licensee of each broadcast STL or FM intercity relay station shall maintain adequate records of the operation, including:

- (1) Hours of operation.
- (2) Program transmitted.
- (3) Frequency check.
- (4) Pertinent remarks concerning transmission.

(b) Where an antenna structure(s) is required to be illuminated see § 17.38 of this chapter.

(c) Station records shall be retained for a period of two years.

§ 4.582 *Station identification*. Each broadcast STL or FM intercity relay station shall announce its call letters at the beginning and end of each period of operation, and during operation, at least once every hour, it shall either announce its call letters or make an announcement¹ which will permit it to be identified.

SUBPART F—RULES GOVERNING TELEVISION AUXILIARY BROADCAST STATIONS

SOURCE: §§ 4.601 to 4.682 appear at 20 F. R. 4472, June 25, 1955, except as otherwise noted.

NOTE: The rules in this subpart govern television auxiliary broadcast stations operated by a television broadcast station licensee. The services performed by these stations may be performed for the television broadcast station licensee by a communications common carrier under the rules governing that service.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 4.601 *Definitions*. (a) Television pickup station: A land mobile station used for the transmission of television

¹ Such as announcement during program operation of the call letters of the broadcast station with which the broadcast STL station is operated.

program material and related communications from the scenes of events occurring at points removed from television broadcast station studios to television broadcast stations.

(b) Television STL station (studio-transmitter link): A fixed station used for the transmission of television program material and related communications from the studio to the transmitter of a television broadcast station.

(c) Television inter-city relay station: A fixed station used for inter-city transmission of television program material and related communications for use by television broadcast stations.

(d) Wherever used in this subpart the term "television broadcast station licensee" includes a television broadcast station permittee.

§ 4.602 *Frequency assignment*. (a) The following frequencies are allocated for assignment to television pickup, television STL, and television inter-city relay stations:

Band A (Mc)	Band B (Mc)	Band C (Mc)	Band D (Mc)	
1990-2008	6875-6900	10550-10575	12700-12725	12975-13000
2008-2025	6900-6925	10575-10600	12725-12750	13000-13025
2025-2042	6925-6950	10600-10625	12750-12775	13025-13050
2042-2059	6950-6975	10625-10650	12775-12800	13050-13075
2059-2076	6975-7000	10650-10675	12800-12825	13075-13100
2076-2093	7000-7025	10675-10700	12825-12850	13100-13125
2093-2110	7025-7050	-----	12850-12875	13125-13150
2110-2127	7050-7075	-----	12875-12900	13150-13175
2127-2144	7075-7100	-----	12900-12925	13175-13200
2144-2161	7100-7125	-----	12925-12950	13200-13225
2161-2178	-----	-----	12950-12975	-----

¹ Pending further order by the Commission, frequencies between 7050 Mc and 7125 Mc will be reserved for use by communications common carriers to provide television pickup and television STL service to television broadcast stations.

Frequencies in the bands 16000-18000 Mc and 26000-30000 Mc are available for assignment on a case-by-case basis for television pickup, STL and intercity relay purposes. Channel widths and frequency tolerance will be specified in individual authorizations. Frequencies shown above between 2450 and 2500 Mc in Band A and between 17850 and 18000 Mc are allocated to accommodate the incidental radiations of industrial, scientific, and medical (ISM) equipment, and stations operating therein must accept any interference that may be caused by the operation of such equipment. ISM frequencies are also shared with other communication services and exclusive channel assignments will not be made,

nor is the channeling shown above necessarily that which will be employed by such other services.

CODIFICATION: Paragraph (a) was amended in the following respects:

1. The designator "2" was inserted after the column heading "Band C" in column 3 of the table, and corresponding footnote 2 was added, 20 F. R. 7169, Sept. 24, 1955. Subsequently, the frequencies "10500-10525" and "10525-10550", footnote designator "2", and footnote 2 were deleted, 21 F. R. 10407, Dec. 28, 1956.

2. The frequencies "13200-13225" were added at the end of the last column under the heading "Band D" of the table, 21 F. R. 10407, Dec. 28, 1956.

3. The text immediately following the table was amended to read as set forth above, 21 F. R. 10407, Dec. 28, 1956.

(b) Except as provided above each television broadcast station licensee in an area may request the assignment of one channel in Band A or Band B and one channel in Band D on an exclusive basis. In making such exclusive assignments, priority will be based on the filing date of an appropriate application (FCC Form 313) completed in accordance with the instructions thereon. Frequency assignments will normally be made as requested if the requested frequency is not assigned to another licensee on an exclusive basis. However, the Commission reserves the right to assign frequencies other than those requested if, in its opinion, such action is warranted.

(c) Where the relative locations of the studio and transmitter are such as to permit co-channel operation of television STL stations by two or more licensees in the same area such licensees may, by mutual agreement, request the assignment of a common channel for STL use on an exclusive basis. In the event that such a shared assignment is made each participating licensee may request the assignment of an individual exclusive channel in Band A, Band B, or Band D in addition to the shared STL channel.

(d) A television broadcast station licensee will normally be limited to the assignment of not more than three channels in Bands A and B combined, only one of which will be assigned on an exclusive basis: *Provided, however,* That additional channels in Bands A and B may be assigned on a non-exclusive basis upon a satisfactory showing that additional channels are necessary and that such additional channels, if assigned, will not be needed to provide an

exclusive channel to some other licensee in the same area within the foreseeable future. The number of channels in Bands C and D that may be assigned to a licensee in a single area is not restricted.

(e) Non-exclusive channel assignments are subject to withdrawal without advance notice to provide an exclusive channel assignment to a licensee pursuant to the provisions of paragraph (b) of this section. The Commission reserves the right to select the non-exclusive channel assignment to be withdrawn; however, withdrawals will normally be made in the following order:

(1) The most recent channel assignment to the licensee having the greatest number of assignments in Band A, B, or D. Determination as to whether the withdrawal shall be made in Band A, Band B, or Band D, will be based on the design of the equipment proposed to be used by the applicant for whom the exclusive channel is required.

(2) Where two or more licensees are assigned individually an equal number of non-exclusive channels in the same band and a greater number of channels in that band than any one of the other licensees, the assignment of most recent date.

(3) In all other cases the assignment of most recent date of a non-exclusive channel.

(f) The use of frequencies in the bands 1990-2110 Mc, 6875-7125 Mc, and 12,700-13,200 Mc, by television inter-city relay stations shall be on a secondary basis and is subject to the condition that no harmful interference is caused to stations operating in accordance with the table of frequency allocations in § 2.104 (a) of this subchapter.

(g) In the event that a television broadcast station licensee engages a communications common carrier to provide television pickup or television STL service, the frequencies available to that licensee may be assigned to the communications common carrier for the purpose of providing such service to that licensee. For the purpose of applying the provisions with respect to exclusive channel assignments and the withdrawal of channels, channels assigned to communications common carriers to provide television pickup or television STL service to an individual television broadcast station licensee will be considered to be assigned to that television broadcast licensee.

§ 4.603 *Sound channels.* (a) The frequencies listed in § 4.602 (a) may be used for the simultaneous transmission of the picture and sound portions of television broadcast programs and for cue and order circuits, either by means of multiplexing or by the use of a separate transmitter within the same channel. When multiplexing of a television STL station is contemplated consideration should be given to the requirements of § 3.687 of this subchapter regarding the overall system performance requirements. Applications for new television pickup, television STL, and television inter-city relay stations shall clearly indicate the nature of any multiplexing proposed. Multiplexing equipment may be installed on licensed equipment without further authority of the Commission: *Provided*, That the Commission in Washington, D. C., and the Commission's engineer-in-charge of the radio district in which the station is located shall be promptly notified of the installation of such apparatus: *And provided further*, That the installation of such apparatus on a television STL station shall not result in degradation of the overall system performance of the television broadcast station below that permitted by § 3.687 of this subchapter.

(b) The following additional frequencies are allocated for assignment to television STL stations and television inter-city relay stations for the transmission of the sound portion only of television program material or communications relating thereto:¹

Mc	Mc	Mc	Mc	Mc
890.5	895.0	899.0	903.0	907.0
891.0	895.5	899.5	903.5	907.5
891.5	896.0	900.0	904.0	908.0
892.0	896.5	900.5	904.5	908.5
892.5	897.0	901.0	905.0	909.0
893.0	897.5	901.5	905.5	909.5
893.5	898.0	902.0	906.0	910.0
894.0	898.5	902.5	906.5	910.5
894.5				

Stations operating on these frequencies must accept any interference that may be experienced from the operation of industrial, scientific, and medical equipment in the 890-940 Mc band.

(c) Remote pickup broadcast stations may be used in conjunction with television pickup stations for the transmission of the aural portion of television

programs or events that occur outside a television studio and for the transmission of cues, orders, and other related communications necessary thereto. The rules governing remote pickup broadcast stations are contained in Subpart D of this part.

§ 4.604 *Frequency selection to avoid interference.* (a) Applicants for new television pickup, television STL, and television inter-city relay stations shall endeavor to select frequency assignments which will be least likely to result in mutual interference with other licensees in the same area. Consideration should be given to the relative locations of receiving points, normal transmission path, and nature of the contemplated operation.

(b) Because of the more or less continuous nature of the operation of television STL stations, frequency assignments to such stations will normally be designated as the exclusive channel of the licensee pursuant to § 4.602 (b).

(c) Where two or more licensees are assigned a common channel for television pickup, television STL, or television inter-city relay purposes in the same area and simultaneous operation is contemplated, they shall take such steps as may be necessary to avoid mutual interference. If a mutual agreement to this effect cannot be reached, the Commission shall be notified and it will take such action as may be necessary, including time-sharing arrangements, to assure an equitable distribution of available facilities.

RULES GOVERNING ADMINISTRATIVE PROCEDURE

§ 4.621 *Cross reference.* See §§ 4.11 through 4.23.

§ 4.631 *Purpose of television auxiliary stations.* (a) The license of a television pickup station authorizes the transmission of program material, orders concerning such program material, and related communications necessary to the accomplishment of such transmissions, to its associated television broadcast station,² to such other stations as are also broadcasting the same program ma-

¹ Shared with other services. See § 2.104 (a) of this chapter.

² As used in this subpart, "associated television broadcast station" means a television broadcast station licensed to the licensee of the television auxiliary broadcast station and with which the television auxiliary station is licensed as an auxiliary facility.

terial, or to the network or networks with which the television broadcast station is affiliated. Television pickup stations may be operated in conjunction with other television broadcast stations not aforementioned: *Provided*, That the transmissions by the television pickup station shall be under the control of the television pickup station licensee and that such operation shall not exceed a total of 10 days in any 30-day period. Television pickup stations may be used to provide temporary studio-transmitter links without further authority of the Commission provided that the installation of the antenna will not increase the height of any existing structure by more than 20 feet. Television pickup stations may not be used in lieu of common carrier fixed inter-city video transmission facilities for network operation of two or more television broadcast stations where adequate common carrier fixed intercity video transmission facilities are available.

(b) The license of a television STL station authorizes the transmission of program material, orders concerning such program material, and related communications necessary to the accomplishment of such transmissions, from the studio or studios of the associated television broadcast station to the transmitter of that station. A television STL station may be authorized to operate in the direction from the transmitter to the studio upon a showing that such operation is necessary and that it may be effected without the assignment of frequencies in addition to those available for assignment to the applicant under the rules in this part.

(c) Television inter-city relay stations provide a means on an interim basis whereby television broadcast licensees may provide their own inter-city television transmission services in connection with the operation of their television broadcast stations. The provision for this service is a purely temporary measure designed to assist the television industry until such time as adequate common carrier facilities are available, and broadcasters who venture into the business of relaying television programs by means of television inter-city relay stations should plan to amortize their investments at the earliest possible date.

§ 4.632 *Licensing requirements.* (a) A license for a television pickup, television STL, or television inter-city relay

station will be issued only to the licensee of a television broadcast station.³ A separate application is required for each transmitter and the application shall be specific with regard to the frequency requested. Except as provided in § 4.604 (b), the first channel assigned in Band A or Band B to a licensee will be considered to be the exclusive assignment provided in § 4.602 (b). Exclusive channel assignments in Band D will be designated only upon request. A licensee may request a change in its exclusive channel assignment only where there are unassigned channels available. In making such changes, the priority set forth in § 4.602 (b) will be observed.

(b) An application for construction permit for a new television inter-city relay station or for renewal of license of an existing station shall be accompanied by a verified statement containing the following:

(1) A full statement as to why the applicant requires the requested facilities including reasons why common carrier facilities cannot be utilized; and,

(2) A showing that the applicant has, at the earliest time reasonably practicable, requested the appropriate common carrier or common carriers serving the general area involved to furnish the inter-city television transmission service required by the applicant, including in such showing a copy of the request or requests and of the reply or replies received from such common carriers.

(c) An application for construction permit for a new television pickup station or for renewal of license of an existing station shall designate the television broadcast station with which it is to be operated and specify the area in which the proposed operation is intended.

(d) In case a licensee has two or more television broadcast stations located in different cities, it shall, in applying for a new television pickup station or for renewal of license of an existing station, designate the television broadcasting station in conjunction with which it is to be operated principally, and it shall not thereafter operate the television pickup station in conjunction with another of its television broadcast sta-

³ The services performed by these stations may be performed for the television broadcast station licensee by a communications common carrier under the rules governing that service.

tions located in a different city for a total of more than 10 days in any 30-day period.

§ 4.633 Temporary authorizations.

(a) Special temporary authority may be granted for the operation, as a television auxiliary broadcast station, of equipment licensed to another television broadcast station, or other class of station, or equipment of suitable design not heretofore licensed. Such authority will normally be granted only for special operation of a temporary nature.

(b) A request for special temporary authority for the operation of a television auxiliary broadcast station may be made by informal application, which shall be filed with the Commission at least 10 days prior to the date of the proposed operation: *Provided*, That an application filed within less than 10 days of the proposed operation may be accepted upon a satisfactory showing of the reasons for the delay in submitting the request.

(c) An application for special temporary authority shall set forth full particulars of the purpose for which the request is made, and shall show the type of equipment, power output, emission, and frequency or frequencies proposed to be used, as well as the time, date and location of the proposed operation. In the event that the proposed antenna installation will increase the height of any natural formation, or existing man-made structure, by more than 20 feet, a vertical plan sketch showing the height of the structure proposed to be erected, the height above ground of any existing structure, the elevation of the site above mean sea level, and the geographic coordinates of the proposed site, shall be submitted with the application.

(d) A request for special temporary authority shall specify a channel or channels consistent with the provisions of § 4.602: *Provided*, That in the case of events of wide-spread interest and importance which cannot be transmitted successfully on these frequencies, frequencies assigned to other services may be requested upon a showing that operation thereon will not cause interference to established stations: *And provided further*, That in no case will a television auxiliary broadcast operation be authorized on frequencies employed for the safety of life and property.

§ 4.634 Remote control operation.

(a) A television auxiliary station may be operated by remote control provided that such operation is conducted in accordance with the conditions listed below, and provided further that the Commission is notified at least 10 days prior to such operation and that such notification is accompanied by a detailed description of the proposed remote control installation showing the manner of compliance with the following conditions:

(1) The operating position shall be under the control and supervision of the licensee and shall be the place at which a licensed operator, meeting the requirements of § 4.665 and responsible for the operation of the transmitter, is stationed.

(2) A carrier operated device shall be provided at the operating position which shall give a continuous visual indication when the transmitter is radiating; or, in lieu thereof, a device shall be provided which will give a continuous visual indication when any transmitter control circuits have been placed in a condition to produce radiation;

(3) Facilities shall be provided at the operating position which will permit the operator to turn the transmitter carrier on and off at will; and

(4) The transmitter and all of its operating controls shall be so installed and protected that they are not accessible to other than duly authorized personnel.

(b) The Commission may notify the licensee not to commence remote control operation, or to cancel, suspend, or change the date of beginning for such operation as and when such action may appear to be in the public interest, convenience, and necessity.

§ 4.635 Unattended operation.

(a) Television inter-city relay stations and television STL stations, where the circuit requires the use of more than one STL transmitter, may be operated unattended: *Provided*, That such operation is conducted in accordance with the conditions listed below: *And provided further*, That the Commission is notified at least 10 days prior to the beginning of such operation and that such notification is accompanied by a detailed description of the proposed installation

showing the manner of compliance with the following conditions:

(1) The transmitter is capable of re-transmitting by self-actuating means a radio signal received from another radio station or stations;

(2) The transmitter shall be provided with adequate safeguards to prevent improper operation of the equipment;

(3) The transmitter shall be so installed and protected that it is not accessible to other than duly authorized persons;

(4) Appropriate observations shall be made, at intervals not exceeding one hour during the period of its operation, at the receiving end of the circuit by a person holding a valid first or second class radiotelephone operator license who shall immediately institute measures sufficient to assure prompt correction of any condition of improper operation that is observed; and

(5) The station licensee shall remain responsible for the proper operation of the station, and all adjustments or tests during or coincident with the installation, servicing, or maintenance of the station which may affect its proper operation, shall be performed by or under the immediate supervision and responsibility of a licensed operator as provided in § 4.665.

(b) The Commission may notify the licensee not to commence unattended operation, or to cancel, suspend, or change the date of the beginning of such operation as and when such action may appear to be in the public interest, convenience, and necessity.

§ 4.636 Power limitations. Television auxiliary broadcast stations will be licensed with a power output not in excess of that necessary to render satisfactory service. The license for these stations will specify the maximum authorized power. The operating power shall not be greater than necessary to carry on the service and in no event more than 10 percent above the maximum power specified. Engineering standards have not been established for these stations. The efficiency factor for the last radio stage of transmitters employed will be subject to individual determination but shall be in general agreement with values normally employed for similar equipment operated within the frequency range authorized.

§ 4.637 Emission and bandwidth. (a) Television auxiliary broadcast stations operating on frequencies above 1500 Mc may be authorized to employ any type of emission suitable for the transmission of the visual and accompanying aural signals. The emission of such stations shall be confined to the assigned channel.

(b) Television auxiliary broadcast stations operating on frequencies below 1500 Mc may be authorized to employ either frequency modulation or amplitude modulation, or both, depending upon the equipment employed. The emissions of such stations shall be confined to the assigned channel.

RULES RELATING TO EQUIPMENT

§ 4.651 Equipment changes. (a) Commission authority upon appropriate formal application (FCC Form 313) therefor is required for any of the following equipment changes:

(1) A change of the transmitter as a whole (except replacement with an identical transmitter), or a change in the power output.

(2) A change of frequency assignment.

(3) A change in the location of a television STL or television intercity relay station (except relocation of the equipment within the same building) or a change in the area of operation of a television pickup station.

(4) Any change in the antenna system of a television STL or television intercity relay station which will result in a change of more than 20 feet in the height above ground of the antenna and supporting structure, or that will result in a change of the direction of the main radiation lobe.

(b) Other equipment changes not specifically referred to above may be made at the discretion of the licensee provided that the engineer-in-charge of the radio district in which the station is located, and the Commission at its Washington office, are notified in writing upon the completion of such changes, and provided that the changes are appropriately reflected in the next application for renewal of license of the television auxiliary broadcast station filed by the licensee.

RULES RELATING TO TECHNICAL OPERATION

§ 4.661 Frequency tolerance. (a) The licensee of a television auxiliary broadcast station shall maintain the operating frequency of its station so that the

normal sideband energy shall fall within the assigned channel. If transmission is by asymmetrical sideband operation, suitable filters or other devices shall be employed to insure a minimum of radiated energy outside the assigned channel.

(b) Television STL stations operating on frequencies shown in Section 4.603 (b) shall maintain their operating frequency within 0.005 percent of the assigned frequency.

§ 4.662 Frequency monitors and measurements. The licensee of a television auxiliary broadcast station shall provide means for measuring the operating frequency in order to insure that the emissions are confined to the authorized channel. The date and time of each frequency check, the frequency as measured and a description or identification of the method employed shall be entered in the station log.

§ 4.663 Station inspection. The licensee of each television auxiliary broadcast station shall make the station available for inspection by representatives of the Commission at any reasonable hour.

§ 4.664 Station and operator licenses; posting of. (a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation of the station shall be posted so that all terms thereof are visible in a conspicuous place in the room in which the transmitter is located: *Provided:*

(1) If the transmitter operator is located at a distance from the transmitter pursuant to § 4.634 the station license shall be posted in the above-described manner at the operating position.

(2) If the station is licensed for mobile operation, the station license or a photo copy thereof shall be affixed to the equipment or kept in the possession of the operators on duty at the transmitter. If a photo copy is used the original license shall be available for inspection by an authorized government representative.

(b) The original license of each station operator shall be posted at the place where he is on duty: *Provided, however,* That if the original license of a station operator is posted at another radio transmitting station in accordance with the rules governing that class of station and

is there available for inspection by an authorized Commission representative, a duly issued verified statement⁴ may be posted at the television auxiliary broadcast station in lieu of such original license: *And provided further,* That if the television auxiliary broadcast station is licensed for mobile⁵ operation, a duly issued verification card⁶ attesting to the existence of such original license may be carried on the person of the operator in lieu of the posting of such license or verified statement.

§ 4.665 Operator requirements. (a) One or more radio operators holding valid radiotelephone first-class or radiotelephone second-class operator licenses shall be on duty at the place where the transmitting apparatus of any television auxiliary broadcast station is located and in actual charge of its operation: *Provided, however,* That if a station is operated by remote control as provided in § 4.634, such operator or operators must be on duty at the control point in lieu of the transmitting location: *And provided further,* That, in case a station is operated unattended as provided in § 4.635 such an operator shall be on duty at the receiving end of the circuit and shall be responsible for the required observations and the proper operation of the station within the terms of its license.

(b) The licensed operator on duty and in charge of a television auxiliary broadcast station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of operators license which he holds and the regulations governing such stations; however, such duties shall in nowise interfere with the operation of the television auxiliary broadcast station.

§ 4.666 Antenna structure, marking and lighting. Where an antenna structure(s) is required to be painted or lighted see § 17.37, *Inspection of tower lights and associated control equipment*; § 17.39, *Cleaning and repainting*; § 17.40, *Time when lights shall be exhibited*; § 17.41, *Spare lamps*; and § 17.42, *Lighting equipment*; of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

⁴ Form 759.

⁵ The term mobile as here used is intended to include any type of mobile operation.

⁶ Form 758-F.

§ 4.667 *Additional orders.* In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders in each case as may be deemed necessary.

§ 4.681 *Station logs.* (a) The licensee of each television auxiliary broadcast station shall maintain adequate records of the operation including:

- (1) Hours of operation.
- (2) Call letters of broadcast station to which program transmitted.
- (3) Frequency check.
- (4) Pertinent remarks concerning transmission.

(b) Where an antenna structure(s) is required to be illuminated see § 17.38, *Recording of tower light inspections in the station record*, of Part 17 of this chapter (Construction, Marking and Lighting of Antenna Structures).

(c) Station records shall be retained for a period of two years.

§ 4.682 *Station identification.* (a) Each television auxiliary broadcast station shall identify itself by transmitting its call sign at the beginning and end of each period of operation; and during operation, shall identify itself on the hour by transmitting its own call sign or the call sign of the television broadcast station with which it is associated.

(b) Identification transmissions during operation need not be made when to make such transmission would interrupt a single consecutive speech, play, religious service, symphony concert, or any type of production. In such cases, the identification transmission shall be made at the first interruption of the entertainment continuity and at the conclusion thereof.

(c) Where more than one television auxiliary broadcast station is employed in an integrated relay system, the station at the point of origination may originate the transmission of the call signs of all the stations in the relay system.

(d) The transmission of the call sign shall normally employ the type of emission for which the station is authorized, i. e., a visual transmitter shall employ visual identification and an aural transmitter shall employ aural identification: *Provided, however,* When the transmitter is used for visual transmission only, the identifying call sign may be trans-

mitted in international Morse code by keying the radio frequency carrier or a modulating signal impressed on the carrier. The Commission may, at its discretion, specify other methods of identification.

SUBPART G—TELEVISION BROADCAST TRANSLATOR STATIONS

AUTHORITY: §§ 4.701 to 4.784 interpret or apply secs. 301, 303, 307, 48 Stat. 1081, 1082, as amended, 1083, as amended; 47 U. S. C. 301, 303, 307.

SOURCE: §§ 4.701 to 4.784 appear at 21 F. R. 3684, May 30, 1956, except as otherwise noted.

DEFINITIONS AND ALLOCATION OF FREQUENCIES

§ 4.701 *Definitions.* (a) *Television broadcast translator station.* A station in the broadcasting service operated solely for the purpose of retransmitting the signals of a television broadcast station or another television broadcast translator station, by means of direct frequency conversion and amplification of the incoming signals and without significantly altering any characteristic of the incoming signal other than its frequency and amplitude, for the purpose of providing television reception to the general public.

(b) *Primary station.* The television broadcasting station radiating the signals which are retransmitted by a television broadcast translator station.

§ 4.702 *Frequency assignment.* (a) An application for a television broadcast translator station shall be specific with regard to the channel requested. One of the following channels may be assigned:

Channel No.	Frequency band	Visual carrier frequency	Aural carrier frequency
	<i>Mc.</i>	<i>Mc.</i>	<i>Mc.</i>
70.....	806-812	807.25	\$11.75
71.....	812-818	813.25	\$17.75
72.....	818-824	819.25	\$23.75
73.....	824-830	825.25	\$29.75
74.....	830-836	831.25	\$35.75
75.....	836-842	837.25	\$41.75
76.....	842-848	843.25	\$47.75
77.....	848-854	849.25	\$53.75
78.....	854-860	855.25	\$59.75
79.....	860-866	861.25	\$65.75
80.....	866-872	867.25	\$71.75
81.....	872-878	873.25	\$77.75
82.....	878-884	879.25	\$83.75
83.....	884-890	885.25	\$89.75

(b) An applicant for a television broadcast translator station shall endeavor to select a channel on which its operation will not cause interference to

other television broadcast translator stations.

(c) A channel listed in paragraph (a) of this section will not be assigned to a television broadcast translator station located:

(1) Within 20 miles of a television broadcast channel assignment on the second, third, fourth, fifth, or eighth channel below or above the requested channel;

(2) Within 55 miles of a television broadcast channel assignment on an adjacent channel;

(3) Within 60 miles of a television broadcast channel assignment on the seventh channel above or below or the fourteenth channel below the requested assignment;

(4) Within 75 miles of a television broadcast channel assignment on the fifteenth channel below the requested assignment;

(5) Within 155 miles of a television broadcast channel assignment on the same channel as that requested for the television broadcast translator station.

The distances specified above in this paragraph are to be determined with respect to channels having the above relationship, between the proposed site of the television broadcast translator station and the Post Office location in any city listed in § 3.606 of this chapter unless the channel shown therein has been assigned to a television broadcast station, in which case the distance shall be determined between the proposed site of the translator and the transmitter site of the television broadcast station. Changes in the Table of Assignments of § 3.606 (b) of this chapter may be made without regard to existing or proposed television broadcast translator stations and where such changes result in minimum separations less than those specified above, the licensee of an affected television broadcast translator station shall file an application for a change in channel assignment to comply with the required separations.

(d) No minimum distance separation is specified between television broadcast translator stations operating on the same channel. However, the separation shall in all cases be adequate to prevent mutual interference. Adjacent channel assignments will not be made to television broadcast translator stations in-

tended to serve all or a part of the same area.

§ 4.703 *Interference.* (a) An application for a new television broadcast translator station or for changes in the facilities of an existing station will not be granted where it is apparent that mutual interference will result within the area or areas intended to be served by such stations. In general, the licensee of a new television broadcast translator station shall protect existing television broadcast translator stations from interference resulting from its operation.

(b) It shall be the responsibility of the licensee of a television broadcast translator station to correct any condition of interference which results from the radiation of radio frequency energy by its equipment on any frequency outside the assigned channel. Upon notice by the Commission to the station licensee or operator that such interference is being caused, the operation of the television broadcast translator station shall be suspended immediately and shall not be resumed until the interference has been eliminated, or it can be demonstrated that the interference is not due to spurious emissions by the television broadcast translator station: *Provided, however,* That short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

(c) In each instance where suspension of operation is required, the licensee shall submit a full report to the Commission after operation is resumed, containing details of the nature of the interference, the source of the interfering signals, and the remedial steps taken to eliminate the interference.

ADMINISTRATIVE PROCEDURE

§ 4.711 *Administrative procedure.* See §§ 4.11 to 4.23 inclusive.

LICENSING POLICIES

§ 4.731 *Purpose and permissible service.* (a) Television broadcast translator stations provide a means whereby the signals of television broadcast stations may be retransmitted to areas in which direct reception of such television broadcast stations is unsatisfactory due to distance or intervening terrain barriers.

(b) A television broadcast translator station may be used only for the purpose of retransmitting to the general public, on one of the channels provided

herein, the signals of a television broadcast station, or of another television broadcast translator station operating on a channel other than the one on which the retransmission is made. The retransmitted signals shall not be significantly altered as to content or technical characteristics other than in frequency and amplitude.

(c) A television broadcast translator station may retransmit the signals of different television broadcast stations or different television broadcast translator stations during different periods of its operation in order to provide programs best suited to the needs of a particular community.

(d) Retransmission of the signals of any station shall be made only in accordance with the provisions of § 4.784.

§ 4.732 *Eligibility and licensing requirements.* (a) A license for a television broadcast translator station may be issued to any qualified individual, organized group of individuals, broadcast station licensee, or local civil governmental body upon an appropriate showing that plans for financing the installation and operation of the station are sufficiently sound to insure continuation of the operation for the period of the license.

(b) More than one television broadcast translator station may be licensed to the same applicant whether or not such stations serve substantially the same area, upon an appropriate showing of need for such additional stations.

(c) Only one channel will be assigned to each television broadcast translator station. Additional television broadcast translator stations may be authorized to provide additional reception. A separate application is required for each television broadcast translator station and each application shall be complete in all respects.

§ 4.733 [Reserved]

§ 4.734 *Remote control operation.* (a) A television broadcast translator station may be operated by remote control, provided that such operation is conducted in accordance with conditions set forth in subparagraphs (1) through (5) of this paragraph.

(1) The control point shall be located on premises under the control and supervision of the licensee or its agent. Facilities shall be provided at the control point to enable the operator to observe

the transmissions of the television broadcast translator station at any time, and which will permit the operator to turn the transmitter on and off at will.

(2) An operator holding a commercial radio operator's license of any class issued by the Commission except a Temporary Limited Radiotelegraph Second Class License or an Aircraft Radiotelephone Operator Authorization, shall be in charge of this control point and shall observe the transmissions of the television broadcast translator station at the control point within one hour after the start of any period of operation and during operation at intervals of no more than six hours. The operator in charge shall promptly correct any condition of improper operation observed and if unable or not qualified to do so under the provisions of § 4.750 (d), shall immediately suspend operation until suitable repairs can be made.

(3) A carrier operated device shall be installed at the control point which shall give a continuous visual indication whenever the transmitter is radiating; or, in lieu thereof, a device shall be provided which will give a continuous visual indication when any transmitter control circuits have been placed in a condition to produce radiation.

(4) The control circuits shall be so designed and installed that failure of any part of the circuit which results in loss of control from the remote control point will place the transmitter in an inoperative condition.

(5) The transmitter and its associated controls shall be so installed and protected that they are not accessible to other than duly authorized persons.

(b) In the event that the control point is not continuously manned by a qualified operator, the transmitter shall be equipped with suitable automatic devices which will place it in an inoperative condition when no signal is available for retransmission. In addition to the automatic and manual controls, a television broadcast translator station may be turned on and off by a time switch.

(c) If remote control is proposed at a new television broadcast translator station, the application for construction permit shall be accompanied by a showing as to the manner of compliance with the above conditions. Any proposal to change a television broadcast translator station from direct control to remote control shall be submitted in the form

of an application for modification of existing authorization accompanied by the above showing of compliance.

§ 4.735 *Power limitations.* (a) A television broadcast translator station will not be authorized to operate with transmitter power output in excess of the rated power output of the transmitter and in no event shall the rated peak visual power output of the transmitter be in excess of 10 watts.

(b) No limit is placed upon the effective radiated power which may be obtained by the use of horizontally or vertically directive transmitting antennas.

CODIFICATION: In § 4.735 (a), the last sentence was deleted, 21 F. R. 6827, Sept. 8, 1956.

§ 4.736 *Emissions and bandwidth.* (a) The license of a television broadcast translator station authorizes the transmission of the visual signal by amplitude modulation (A5) and the accompanying aural signal by frequency modulation (F3).

(b) Standard width television channels will be assigned and the emissions of a television broadcast translator station shall be confined to the authorized channel in accordance with the Television Technical Standards contained in Part 3, Subpart E of this chapter.

(c) Spurious emissions, including radio frequency harmonics, more than 3 Mc above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than 60 decibels below the visual transmitter power. Greater attenuation will be required if such spurious emissions cause interference to any radio service.¹

CODIFICATION: In § 4.736, footnote designator "1" was inserted following paragraph (c), and footnote "1" was added, 21 F. R. 6827, Sept. 8, 1956.

§ 4.737 *Antenna location.* (a) An applicant for a new television broadcast translator station or for a change in the facilities of an existing station shall endeavor to select a site which will provide a line-of-sight transmission path to the entire area intended to be served and at

which there is available a suitable signal from the primary station or stations. The transmitting antenna should be placed above growing vegetation and trees lying in the direction of the area intended to be served to minimize the possibility of signal absorption by foliage.

(b) A site within 5 miles of the area intended to be served is to be preferred if the conditions in paragraph (a) of this section can be met.

(c) Consideration should be given to accessibility of the site at all seasons of the year and to the availability of facilities for the maintenance and operation of the television broadcast translator station.

(d) The transmitting antenna should be located as near as is practical to the transmitter to avoid the use of long transmission lines and the associated power losses.

(e) Consideration should be given to the existence of strong radio frequency fields from other transmitters at the translator site and the possibility that such fields may result in the retransmission of signals originating on frequencies other than that of the primary station.

EQUIPMENT

§ 4.750 *Equipment and installation.*

(a) An application for construction permit for a new television broadcast translator station or for changes in the facilities of an existing station shall specify equipment which has been type approved by the Commission.

(b) Type approval will be granted only after tests have been made at the Commission's Laboratory, Laurel, Maryland. Manufacturers may submit a production model for type approval and such approval, if granted, will be considered to apply to all identical models manufactured under that type number. No change, either mechanical or electrical, may be made in any type approved apparatus without prior approval of the Commission upon appropriate application therefor. Type approval may be withdrawn at any time if the apparatus fails to meet the requirements under which type approval was granted.

(c) Type approval will be granted only if the apparatus meets the following requirements:

(1) The frequency converter and associated amplifiers shall be so designed that the electrical characteristics of the incoming signal will not be altered sig-

¹ These requirements shall not be applicable to transmitters installed prior to January 1, 1958: *Provided, however,* That in the event that interference is caused to other radio stations, the licensee shall take such steps as may be necessary to eliminate the interference.

nificantly upon retransmission except as to frequency and amplitude.

(2) The overall characteristics of the apparatus shall be such that emissions on any discrete frequency more than 3 Mc above or below the upper and lower limits respectively, of the assigned channel shall be attenuated no less than 60 decibels below the visual transmitted power, regardless of whether such emissions are generated within the translator or are produced as the result of an external signal introduced into the input circuits of the translator apparatus.²

(3) The local oscillator employed in the frequency converter shall be sufficiently stable that, subject to variations in ambient temperature between -15° and $+55^{\circ}$ Centigrade and power main voltage variations of 15 percent, its frequency will not vary more than 0.01 percent.

(4) The translator shall be so designed and adjusted that its overall characteristics will remain essentially linear under all conditions of operation. It shall be equipped with suitable automatic circuits to maintain a constant output under conditions where the intensity of the received signal varies 20 decibels. If a manual adjustment is provided to compensate for differing average signal intensities which may be encountered in various locations and installations, provision shall be made for determining the proper setting of the manual adjustment by means of a meter or meter jack to measure direct current of voltage of appropriate circuits in the translator. If improper adjustment of the manual control could result in improper operation of the translator, a label shall be affixed at the adjustment control bearing a suitable warning.²

(5) The tube or tubes employed in the final radio frequency amplifier shall be of the proper rating to supply the rated power output. The rated maximum

peak visual power output of the translator shall not be greater than 10 watts.

(6) The apparatus shall be equipped with suitable automatic devices which will place it in an inoperative condition in the absence of a visual and aural signal from the primary station. Such automatic devices may be provided with reasonable time constants to prevent momentary failures of the incoming signal from interrupting the operation.

(7) In general, the transmitter shall be mounted on racks and panels or in totally enclosed frames protected as required by Article 810 of the National Electrical Code.

(8) (i) Any manufacturer desiring to submit a translator for type approval shall supply the Commission with full specification details (two sworn copies) as well as the test data specified in this section. If this information appears to meet the requirements of the rules, shipping instructions will be issued to the manufacturer. The shipping charges to and from the Laboratory at Laurel, Maryland, shall be paid for by the manufacturer. Approval of a translator will only be given on the basis of the data obtained from a sample translator submitted to the Commission for test.

(ii) In approving a translator upon the basis of the tests conducted by the Laboratory, the Commission merely recognizes that the type of translator has the inherent capability of functioning in compliance with the rules, if properly constructed, maintained, and operated.

(iii) Additional rules with respect to withdrawal of type approval, modification of type approval equipment, and limitations on the findings upon which type approval is based are set forth in Part 2, Subpart F, of this chapter.

(d) The installation of a television broadcast translator station shall be made only by, or under the direct supervision of, a qualified electronics engineer, and any repairs or adjustments made during or subsequent to the installation, which could result in improper operation, shall be made by or under the direct supervision of an operator holding a valid first or second class radiotelephone operator's license issued by the Commission.

(e) The choice of transmitting and receiving antennas is left to the discretion of the applicant. In general, the transmitting antenna should be designed to provide maximum signal over the area

² These requirements shall not be applicable to transmitters installed prior to January 1, 1958: *Provided, however*, That in the event that interference is caused to other radio stations, the licensee shall take such steps as may be necessary to eliminate the interference. Type approvals granted prior to September 1, 1957, will be designated as Limited Type Approval. Such approval will be granted only if it is found that reasonable precautions have been taken in the design of equipment, to minimize interference resulting from spurious emissions.

intended to be served and to minimize radiation over other areas, particularly those in which interference could be caused to the reception of other stations. The Commission reserves the right to require the use of suitable directive transmitting antennas in order to permit the assignment of the same channel to two or more television broadcast translator stations located in the same general area. An application for construction permit for a new television broadcast translator station or for changes in the facilities of an existing station, shall supply complete details of the proposed receiving and retransmitting antenna systems, including an accurate plot of the field pattern of the transmitting antenna, if directive.

CODIFICATION: §§ 4.750 (c), footnote designator "2" was inserted following subparagraphs (2) and (4), and footnote "2" was added, 21 F. R. 6827, Sept. 8, 1956.

§ 4.751 *Equipment changes.* (a) No change, either mechanical or electrical, may be made in type approved apparatus except upon instructions of the manufacturer of the equipment, based upon Commission approval for the change granted to the manufacturer in accordance with § 4.750 (b).

(b) Formal application (FCC Form 346) is required for any of the following changes:

(1) Replacement of the transmitter as a whole, except by one of an identical type.

(2) A change in the transmitting antenna system, including the direction of radiation, directive antenna pattern, or transmission line.

(3) An increase in the overall height of the antenna above ground of more than 20 feet or which will result in an overall height above ground of more than 170 feet.

(4) A change of the control point of a remotely controlled television broadcast translator station or any change in the control circuits.

(5) Any change in the location of the transmitter except a move within the same building or upon the same tower or pole, and any horizontal change in the location of the transmitting antenna in excess of 500 feet.

(6) A change of frequency assignment.

(7) A change of authorized operating power.

(8) A change of the primary TV station or stations being retransmitted.

(c) Other equipment changes not specifically referred to above may be made at the discretion of the licensee, provided that the Engineer in Charge of the radio district in which the television broadcast translator station is located and the Commission's Washington, D. C. office, are notified in writing upon completion of such changes, and provided, further, that the changes are appropriately reflected in the next application for renewal of license of the television broadcast translator station.

TECHNICAL OPERATION

§ 4.761 *Frequency tolerance.* The licensee of a television broadcast translator station shall maintain the visual carrier frequency and the aural center frequency at the output of the translator within 0.01 percent of its assigned frequencies when the primary station is operating exactly on its assigned frequencies. This tolerance shall not be exceeded at times when the primary station is not on its assigned frequencies, by more than the amount of the departure by the primary station.

§ 4.762 *Frequency monitors and measurements.* (a) The licensee of a television broadcast translator station is not required to provide means for measuring the operating frequencies of the transmitter. However, only equipment having the required stability will be approved for use at a television broadcast translator station.

(b) In the event that a television broadcast translator station is found to be operating beyond the frequency tolerance prescribed in § 4.761, the licensee shall promptly suspend operation of the translator and shall not resume operation until the translator has been restored to its assigned frequencies. Adjustment of the frequency determining circuits of a television broadcast translator station shall be made only by a qualified person in accordance with § 4.750 (d).

(c) The licensee of a television broadcast translator station may, at its discretion, provide means for comparing the frequency of the translator with an external frequency source of known accuracy as a preventive measure to avoid unnecessary interruptions to service.

§ 4.763 *Time of operation.* (a) A television broadcast translator station is

not required to adhere to any regular schedule of operation. However, the licensee of a television translator station is expected to provide a dependable service to the extent that such is within its control and to avoid unwarranted interruptions to the service provided.

(b) If causes beyond the control of the licensee require that a television broadcast translator station remain inoperative for a period in excess of 10 days, the Engineer in Charge of the radio district in which the station is located shall be notified promptly in writing, describing the cause of failure and the steps taken to place the station in operation again, and shall be notified promptly when the operation is resumed.

(c) Failure of a television broadcast translator station to operate for a period of 30 days or more, except for causes beyond the control of the licensee, shall be deemed evidence of discontinuance of operation and the license of the station will be cancelled.

(d) A television broadcast translator station shall not be permitted to radiate during extended periods when signals of the primary station are not being retransmitted.

§ 4.764 *Station inspection.* The licensee of a television broadcast translator station shall make the station and the records required to be kept by the rules in this subpart, available for inspection by representatives of the Commission.

§ 4.765 *Posting of station and operators licenses.* (a) The station license and any other instrument of authorization or individual order concerning the construction of the equipment or manner of operation shall be posted in a conspicuous place in the room in which the transmitter is located so that all terms thereof are visible; *Provided:*

(1) If the transmitter is operated by remote control pursuant to § 4.734, the station license shall be posted in the above described manner at the control point.

(2) If the transmitter is installed so as to be exposed to the elements and posting of the license would result in its being so exposed, the license or a photocopy thereof may be kept in the possession of the operator in charge of the transmitter. If a photocopy is used, the original license shall be conveniently available for inspection by a representative of the Commission.

(b) The original of each station operator license shall be posted at the place where he is on duty: *Provided, however,* That if the original license of a station operator is posted at another radio transmitting station in accordance with the Rules governing that class of station and is there available for inspection by a representative of the Commission, a verification card (Form 758-F) is acceptable in lieu of the posting of such license: *Provided, further, however,* That if the operator in charge holds a restricted radiotelephone operator permit of the card form (as distinguished from the diploma form), he shall not post that permit but shall keep it in his personal possession.

§ 4.766 *Operator requirements.* (a) The actual operation of the transmitting apparatus at a television broadcast translator station shall be carried on only by a person holding a valid commercial radio operator's license or permit of any class issued by the Commission except a Temporary Limited Radiotelegraph Second-Class License or an Aircraft Radiotelephone Operator Authorization who shall provide supervision to no less extent than that required by § 4.734 and who shall be responsible for the proper operation of the apparatus with respect to those functions under his control. This responsibility, however, shall in no way relieve the licensee of its responsibility for the proper operation of the station.

(b) Any repairs or adjustments to a television broadcast translator station which might result in improper operation of the equipment shall be made only by or under the direct supervision of a person holding a valid first or second class radiotelephone operator's license issued by the Commission.

(c) The licensed operator on duty and in charge of a television broadcast translator station may, at the discretion of the licensee, be employed for other duties or for the operation of another station or stations in accordance with the class of license which he holds and the rules and regulations governing such stations. However, such duties shall in nowise interfere with the operation of the television broadcast translator station.

§ 4.767 *Marking and lighting of antenna structures.* The marking and lighting of antenna structures employed

at a television broadcast translator station, where required, will be specified in the authorization issued by the Commission. Part 17 of this chapter sets forth the conditions under which such marking and lighting will be required and the responsibility of the licensee with regard thereto.

§ 4.768 *Additional orders.* In case the rules contained in this part do not cover all phases of operation or experimentation with respect to external effects, the Commission may make supplemental or additional orders, in each case as may be deemed necessary.

§ 4.769 *Copies of rules.* The licensee of a television broadcast translator station shall have current copies of Part 3, Part 4, and Part 17 of this chapter available for use by the operator in charge, and is expected to be familiar with those rules relating to the operation of a television broadcast translator station. Copies of the Commission's rules may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at nominal cost.

OPERATION

§ 4.781 *Station records.* (a) The licensee of a television broadcast translator station shall maintain an operating log showing the following:

- (1) Hours of operation.
- (2) Call letters, channel, and location of primary station or stations.

(3) Time of periodic observation required by § 4.734 (a) (2), and operating conditions signed by the operator making the observation.

[Subparagraph (3) amended, 21 F. R. 3931, June 8, 1956]

(4) A record of all repairs, adjustments, maintenance, tests, and equipment changes, showing the date of such events, the name and qualifications of the person performing the operation, and a brief description of the matter logged.

(b) Where an antenna structure is required to be illuminated, see § 17.38 of this chapter.

(c) The operating log shall be made available upon request to any authorized representative of the Commission.

(d) Station records shall be retained for a period of two years.

§ 4.782 [Reserved]

§ 4.783 *Station identification.* (a) The call sign of a television broadcast translator station shall be transmitted in international Morse Code by means of an automatic keying device, at the beginning and end of each period of operation and during operation, within 5 minutes of the hour and half hour. This transmission may be accomplished either by turning the visual and aural carriers of the translator on and off in the proper sequence or by superimposing an audio frequency tone containing the telegraphic identification, on the visual and aural carriers radiated by the translator. The modulation level of the identifying signal shall not be less than 30 percent of the aural signal.

(b) The Commission may, in its discretion, specify other methods of identification.

(c) Call signs for television broadcast translator stations will be made up of the initial letter K or W followed by the channel number assigned to the translator and two letters. The use of the initial letter will generally follow the pattern used in the broadcast service, i. e., stations west of the Mississippi River will be assigned an initial letter K and those east of the Mississippi River the letter W. The two letter combinations following the channel number will be assigned in order and requests for the assignment of particular combinations of letters will not be considered.

§ 4.784 *Rebroadcasts.* (a) The term "rebroadcast" means the reception by radio of the programs or other signals of a radio or television station and the simultaneous or subsequent retransmission of such programs or signals for direct reception by the general public.

(b) The licensee of a television broadcast translator station shall not rebroadcast the programs of any television broadcast station or other television broadcast translator station without obtaining prior consent of the station whose signals or programs are proposed to be retransmitted. The Commission shall be notified of the call letters of each station rebroadcast and the licensee of the television broadcast translator station shall certify that express authority has been received from the licensee of the station whose programs are retransmitted.

(c) A television broadcast translator station is not authorized to rebroadcast

the transmissions of any class of station other than a television broadcast station or another television broadcast translator station.

Part 5—Experimental Radio Services

Subpart B—Applications and Licenses

Sec.

5.55 Forms to be used. [Amended]

5.57 Supplementary statements required. [Amended]

5.63 License period. [Amended]

SUBPART B—APPLICATIONS AND LICENSES

§ 5.55 *Forms to be used*—(a) *Application for construction permit for land stations and fixed stations.* * * *

(1) The antenna structures proposed to be erected will exceed an overall height of 170 feet above ground level, except that where the antenna is mounted on top of an existing man-made structure other than an antenna structure and does not increase the overall height of such man-made structure by more than 20 feet, or

(2) The antenna structures proposed to be erected will exceed an overall height of 1 foot above the established airport (landing area) elevation for each 200 feet of distance, or fraction thereof, from the nearest boundary of such landing area, except that where the antenna does not exceed 20 feet above the ground or if the antenna is mounted on top of an existing man-made structure (other than an antenna structure) or natural formation and does not increase the overall height of such man-made structure or natural formation by more than 20 feet.

[Subparagraphs (1) and (2) amended, 21 F. R. 5515, July 24, 1956]

* * *

§ 5.57 *Supplementary statements required.* * * *

(f) *Applications involving technical demonstrations of equipment or techniques in the frequency band 2900–3246 Mc.* The provisions of paragraphs (a) and (b) of this section shall not be applicable to applications from educational institutions for an authorization in the Experimental Service (Research) to be used for technical instruction or demonstration of microwave techniques using pulsed emissions in the frequency band 2900–3246 Mc allocated for such use, un-

der certain conditions, in Part 2 of this chapter. Instead, such applicants shall include, as a part of the application for construction permit, the following:

(1) A satisfactory showing that the operation of a radio transmitter in the band 2900–3246 Mc is essential to the institution's program of instruction.

(2) A satisfactory showing that the actual radiation of radio frequency energy is essential to the institution's program of instruction in lieu of using a dummy antenna, shielded room or other means to suppress or confine radiation.

(3) The estimated daily hours of operation and the estimated dates of the beginning and end of the specific time period for which the requested operation is required.

[Paragraph (f) added, 20 F. R. 1242, Mar. 1, 1955]

§ 5.63 *License period.* (a) Licenses for radio stations in the Experimental Radio Services will be issued normally for a period of one year unless otherwise stated in the instrument of authorization and shall expire at 3:00 a. m. EST one year from date of issuance.¹

CODIFICATION: In § 5.63, paragraph (a) was amended to read as set forth above, and paragraph (b) was deleted, 19 F. R. 1176, Mar. 3, 1954.

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Part 6—International Fixed Public Radiocommunication Services [Revised]

FIXED PUBLIC SERVICES

DEFINITIONS

Sec.

6.1 Fixed public service.

6.2 Fixed public press service.

6.3 Agriculture service.

6.4 Fixed station.

6.5 Point-to-point telegraph station.

6.6 Point-to-point telephone station.

6.7 Point of communication.

6.8 Authorized service.

6.9 Radiotelegraph.

6.10 Radiotelephone.

¹In order to convert existing license periods so that all such licenses will no longer expire on the same date, the Commission will, during the year following the effective date of the change in rules, issue licenses for periods up to a maximum of 24 months. However, all such longer term licenses shall, upon their expiration, be renewed for the usual one-year period.